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CLEAN AIR ACT AMENDMENTS OF 1990 AND THE IMPACT OF THE SEVENTH MEETING OF THE PARTIES TO THE MONTREAL PROTOCOL

HEARING

BEFORE THE

SUBCOMMITTEE ON
HEALTH AND ENVIRONMENT

OF THE

COMMITTEE ON COMMERCE
HOUSE OF REPRESENTATIVES

ONE HUNDRED FOURTH CONGRESS

SECOND SESSION

JANUARY 25, 1996

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CLEAN AIR ACT AMENDMENTS OF 1990 AND THE IMPACT OF THE SEVENTH MEETING OF THE PARTIES TO THE MONTREAL PROTOCOL

THURSDAY, JANUARY 25, 1996

House of Representatives,
Committee on Commerce,
Subcommittee on Health and Environment,
Washington, DC.

The subcommittee met, pursuant to notice, at 11:09 a.m., in room 2123, Rayburn House Office Building, Hon. Michael Bilirakis (chairman) presiding.

Members present: Representatives Bilirakis, Barton, Burr, Bilbray, Norwood, Coburn, Lincoln, Stupak, and Hall.

Staff present: Robert Meyers, majority counsel; and Bill Tyndall, minority counsel.

Mr. Bilirakis. Good morning. The hearing will come to order.

I understand there may be a vote called in approximately a half hour from now, so even though we don't have all that many members here yet I think it wise that we get started so we can get as much in before the vote as we can.

I would like to thank our witnesses for being here for our hearing on Title VI of the Clean Air Act and the recent meeting of the Parties to the Montreal Protocol in Vienna, Austria.

Our first and only witness panel consists of U.S. officials who are in the direct line of responsibility regarding the administration and implementation of the Montreal Protocol. The State Department maintains overall responsibility for leading the U.S. delegation to the various meetings of the Protocol countries. Significant technical expertise is provided to the U.S. delegation by the Environmental Protection Agency and the Department of Agriculture. In addition, EPA is responsible for the implementation of Title VI, which incorporates the Montreal Protocol by reference and also through direct legislative language. So today we have the officials who we can praise—or perhaps, in some cases, blame—for the results of the most recent international negotiation.

In this regard, I would like to make some general comments concerning the Montreal Protocol process before yielding time to other members of this subcommittee for delivery of an opening statement.

As is evident from the submitted testimony, the Montreal Protocol is far from a static document. Indeed, much has changed from the initial Vienna Convention in 1985, to the Montreal Protocol in

1987, to the London amendments in 1990, and the Copenhagen amendments in 1992.

Some have praised this fluid nature for allowing U.S. Treaty obligations to follow the state of science in ozone depletion. Some have criticized the Protocol process for the very same reason. I would note, however, that whatever one's views are with regard to the science of ozone depletion, the Montreal Protocol process carries with it both a great potential for economic and social impact in the United States and a great responsibility on the part of those who staff the U.S. delegation and negotiate on behalf of the citizens of our country.

This is a responsibility I take most seriously. I think all of us do. A great degree of public trust has been invested in our U.S. delegation.

And while Ambassador Milam testified last August—before the Oversight and Investigations Subcommittee—that, and I quote him, "This is a negotiation, Congressman," we are not negotiating the purchase of a home or who is responsible for taking out the trash on Sunday night. We are negotiating, in effect, significant laws and regulations that our citizens will live under for the next two to three decades.

In this regard, I think it is important to note that the Montreal Protocol allows substantial changes in Treaty commitments to take place not only under formal amendments—subject to ratification by the Senate—but less formal adjustments to phaseout schedules for controlled substances. Adjustments, such as those agreed to in Vienna, go into effect 6 months after agreed to by the parties.

Thus, I think it is the obligation of Congress to review such adjustments and ensure that the best interests of our citizens are protected. It is also the particular responsibility of this subcommittee to ensure that implementation of the Protocol, through Title VI of the Clean Air Act, is consistent with U.S. obligations and represents the best policy choices for our Nation.

Our subcommittee's legislative review of the Clean Air Act amendments then begins with the title added just over 5 years ago. As with other sections of the Act, Title VI indicates that our legislative craftsmanship, in the heat of a long and tortuous conference committee, was not entirely perfect. This hearing and the future review of the subcommittee will help determine the scope of adjustments we will propose to this and other titles.

So, again, I want to welcome our witnesses. I want to thank my few colleagues who appear to be in attendance and will be in attendance. And at least with respect to Assistant Administrator Nichols and associated staff from EPA, I believe we may be seeing quite a bit more of each other during the balance of this year.

I would recognize Mr. Stupak for an opening statement.

Mr. STUPAK. Thank you, Mr. Chairman, and thank you very much for holding this important hearing on results of the most recent meeting of the parties to the Montreal Protocol.

As you know, the international agreement seeks to restore stratospheric ozone levels by phasing out production and use of certain ozone-depleting compounds. In the United States, the Protocol is implemented through Title VI of the Clean Air Act amendments of 1990. However, in some ways Title VI of the Clean Air Act requires the United States to move faster than required under the Montreal Protocol.

One example is this widely used pesticide and fumigant, methyl bromide, which is subject to a phaseout order in the year 2001, even though the Montreal Protocol until this fall did not have any phaseout requirement. Now as a result of the seventh meeting of the parties to the Montreal Protocol, the parties have agreed to have a phaseout date.

However, it will allow use of the pesticide until the year 2010, 9 years after a ban goes into effect in the United States. Even then, other countries may take advantage of an exemption for essential agricultural purposes. Worse, this phaseout applies only to developed countries. Developing countries, such as Mexico, are under no phaseout deadline.

There seems to be widespread support for the notion that methyl bromide is a significant depleter of the ozone. It is also a highly toxic pesticide that is a concern due to its impact on human health and our environment. However, to place U.S. farmers and import export companies at a competitive disadvantage by banning the pesticide use here, while many of our trading partners continue to use it, makes no sense. Certainly a solution can and must be found that protects not only the environment and our ozone layer but our farmers back here in the United States.

I am willing to work with the administration as well as the distinguished chairman of the subcommittee and the full committee to identify and implement a common-sense solution to this problem.

I thank you, Mr. Chairman. I yield back the balance of my time.

Mr. BILIRAKIS. I thank the gentleman.

Mr. Burr.

Mr. BURR. Thank you, Mr. Chairman.

Mr. Chairman, I appreciate you taking the time to hold this important hearing. As you know, I represent a predominantly agricultural district, and the issue of methyl bromide phaseout has not gone unnoticed by farmers in the Fifth District of North Carolina. I was an original cosponsor of legislation drafted by my colleague from Florida, Dan Miller.

I know from Ms. Nichols' testimony that the EPA does not approve of that approach. I look forward to having a dialog with her on this subject today.

I continue to be concerned that the United States is putting itself at an economic disadvantage in world markets. I noticed in Mr. Pomerance's testimony that developing countries have anywhere from 10 years lag time for phaseouts to an undetermined amount of time for the substance methyl bromide.

Under Title 608 of the Clean Air Act, substances must be scheduled for phaseout within 7 years where they either have an ozone-depleting potential, 0.2 or greater, or are known—and I quote—known or may be reasonably anticipated to cause or contribute to harmful effects in stratospheric ozone layer. Present United Nations environmental program statements place the ozone-depleting potential for methyl bromide to be 0.6. It seems neither reasonable or sensible to place the United States at a disadvantage for 9 years while the rest of the world continues to utilize methyl bromide.

Furthermore, we are continuing to allow the manufacturing and export to our competitors without giving our farmers equal access and the benefits of this product. At the August 1, 1995, Oversight and Investigations Subcommittee hearings, Ms. Nichols testified that EPA believed in a safety valve to allow continued production for specific essential uses where no alternatives exist would be an important part of the process. While I agree that this is necessary, I do not believe that EPA has the statutory authority to grant such exemptions.

I will look forward to hearing what our witnesses have to say today about this as well. Does the EPA agree that the Montreal Protocol is the agreement we should be living under or should this Congress revise our own plans under the Clean Air Act?

Again, Mr. Chairman, I thank you for holding these hearings. The farmers in North Carolina and certainly around the United States really do appreciate the effort we are taking to get to the bottom of the methyl bromide question.

Mr. Chairman, I yield back.

Mr. BILIRAKIS. The gentleman's time is expired.

Mr.—who is next? The gentleman from Georgia.

Mr. NORWOOD. Mr. Chairman, I would simply like to associate myself with your opening remarks and ask that my opening statement be placed in the record.

Mr. BILIRAKIS. Without objection.

[The prepared statement of Hon. Charlie Norwood follows:]

PREPARED STATEMENT OF HON. CHARLIE NORWOOD, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF GEORGIA

Mr. Chairman, thank you for calling today's hearing. Hopefully, today we will get some answers to questions and be able to sort through the rules from the EPA, specifically Title 6 of the Clean Air Act which regards stratospheric ozone protection.

We know that science is divided on the extent of the danger of ozone depletion and on both sides activists have promoted hysteria.

Before we commit to international treaties that will profoundly affect our way of life and potentially cost the taxpayer billions of dollars, we need to know whether our decisions will be based on sound science or if they are based on the latest popular environmental theory which may promote an emotional response but does not have any basis in reality. We all know bad news sells.

I would like to recommend to each Member of the subcommittee an article from *World* magazine by science writer, Forrest Mims III, "The Hole in Ozone Science." (Mr. Chairman, I ask unanimous consent that this article be made part of the hearing record.)

I found this article to be balanced and it raises some important questions. The article is critical of both sides on this debate. For instance, he points out that some who downplay the effect of chlorofluorocarbons (CFCs) claim that CFCs don't even enter the upper stratosphere because they are heavier than air. Storms and wind can send gases heavier than air into the stratosphere.

Others claim that banning CFCs will make refrigeration so expensive that "between 20 to 40 million people will die yearly from hunger, starvation, and food borne diseases." We do not need to replace hysteria on the left with hysteria on the right.

However, we do need to examine the claims of those who seek to bar more chemicals.

Regarding ozone I am concerned that the EPA is using selected evidence. The World Meteorological Organization, days before December's Vienna meeting, announced that "scientific evidence confirms continuous depletion of the ozone layer."

Yet, there was no scientific consensus to back this up. In fact, the British Antarctic Survey measured only a slight increase and NASA scientist, Mark Schoeberl released a study claiming that future ozone holes may not expand. Is the EPA listening to all sources? We need to find out.

I am concerned that, armed with insufficient evidence, we are emphasizing banning chemicals, when it appears we have not identified the extent of the problem. In fact, we need to focus on the extent of that problem instead of assuming that the sky is falling with no verification.

I am glad the Environmental Protection Agency is represented here today. The EPA demands that American business comply with it's onerous rules but, when it comes to producing cost-benefit analysis in compliance with the Clean Air Act the EPA has clearly fallen down on the job. Reports were to be given in 1991, 1992 and 1994 and we are still waiting.

Maybe this hearing will help us determine the impact of the Vienna Meeting of the Parties to the Montreal Protocol. We need to examine why the United States is agreeing to accelerated schedules of CFC phase-out, why the U.S. is providing 25% of the funding, and why other countries are not being held to these same standards.

I thank the Chairman and yield back the balance of my time.

Mr. BILIRAKIS. Mr. Bilbray.

Mr. BILBRAY. Thank you, Mr. Chairman.

I would like to thank you for scheduling this hearing on Title VI, and I think that it is one of the more technical sections of the Clean Air Act. National and international environmental safeguards are very important, Mr. Chairman, and the United States has played a major role in setting the parameters and examples for effective public health and environmental strategies. As these efforts continue, it is essential that the actions taken by the United States both at home and abroad are based on sound scientific principles and policies.

Having said this, I look forward to the testimony from our witnesses today as several fundamental questions have emerged as to certain environmental policy decisions which have been made recently. I am very interested in the scientific and policy rationale for the concessions made by the United States in the acceleration of international phaseout of HCFCs beyond those established in the 1992 Copenhagen Agreement at the sixth meeting of the parties in Vienna last December.

I also have questions about several aspects of the policy on methyl bromide which have been developed under the Montreal Protocol, especially the different treatment schedule between the developed and the undeveloped nations, for the phaseout of methyl bromide.

I am also curious as to how the Montreal Protocol relates to the U.S. Clean Air Act and subsequent effects of both on the use of methyl bromide in American agriculture and commerce.

In a word, Mr. Chairman, I do not have very much agriculture in my district, but I see that—I am aware, because I have a major port, that our own Federal Government mandates the use of methyl bromide and only methyl bromide in the importation of certain vegetables and fruits into this country. Where is the replacement and what is the strategy there?

The other issue, as somebody who lives on the Mexican border, is that I believe the protection of the environment does not stop at our international frontiers. To have one farmer on one side of Otay mesa in the U.S. side not being allowed to use a substance because it is environmentally damaging but another farmer on the south side at Mesa de Otay to be allowed to use methyl bromide I think is not only potentially environmentally damaging, but I think it is hypocritical to those of us who keep standing up and saying that American industry and American jobs should be protected.

I think we need to protect the environment in a balanced way without destroying our American commerce, and forcing commerce overseas at the same time that we are ignoring the fact that methyl bromide used on the south side of the border is just as damaging as methyl bromide used on the north side, and I think the facts need to reflect that in our policies.

I yield back the remainder of my time, Mr. Chairman.

Mr. BILIRAKIS. I thank the gentleman.

Without objection, any other opening statements of members who are not here as yet will be made a part of the record.

[The prepared statements of Hon. Tom A. Coburn and Hon. Blanche Lincoln follow:]

PREPARED STATEMENT OF HON. TOM A. COBURN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OKLAHOMA

Thank you Mr. Chairman: I look forward to this hearing and to the testimony being presented today.

The decisions made at the recent meeting of the Parties to the Montreal Protocol on substances that deplete the ozone layer will undoubtedly have a profound impact on the United States. It will have an impact on our economy, industrial development, agricultural output, consumer choice, and even, perhaps, the environment.

The impact of these on our economy is real and tangible. I hope that the estimated environmental benefit from these decisions is made on an equally real and tangible assessment of the scientific evidence.

I am very interested in hearing the methodology used to reach the decisions made at the recent Montreal Protocol meeting and how these decisions will impact the taxpayers and farmers in this country. I am also interested in hearing how well these decisions match up with real, objective science.

Thank you.

PREPARED STATEMENT OF HON. BLANCHE LINCOLN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ARKANSAS

Today's hearing is on a topic that strikes a cord with many constituents of Arkansas' 1st Congressional District. The 1st District is an extremely agricultural area. In fact, it is the largest rice producing district in the country. To protect their crops, many of the producers use methyl bromide to fumigate their harvested rice, the warehouses, silos, food processing facilities, trucks, ships and other containers to eliminate insects and rodents that contaminate their product. Methyl bromide is also used on many vegetables and fruits as well as on cotton bales and cotton seed.

Additionally, many countries will not accept produce that has not been subject to methyl bromide fumigation. For our rice, cotton, soybean and wheat farmers that export a large portion of their crop, this inability to guarantee pest-free products would devastate their export business. Such exports account for about $15 billion in U.S. exports annually.

The parties to the Montreal Protocol recently met in Vienna to discuss the policy options relating to the elimination of manmade methyl bromide. During this meeting, the parties agreed to start phasing out the consumption and production of methyl bromide in 2001, with the ultimate elimination of the pesticide in 2010. This recommendation is now out of sync with EPA regulations.

Current EPA regulations on methyl bromide ban the production and import of the pesticide by 2001. While no good alternative currently exists for methyl bromide, EPA expects that by 2001, science and industry will have produced a viable alternative to this pesticide. I hope that they do. However, in the event that scientists fail to produce a practical option, we need to envision some sort of contingency plan.

I believe that this hearing is necessary to determine Congress' next plan of action. There are several options we can choose: 1) keep the current EPA phaseout schedule; 2) modify current law to reflect the Montreal Protocol parties' most recent recommendation; or 3) create a critical agricultural use exemption for those products without an pesticide alternative to methyl bromide.

I must say that I am concerned that an economical and efficient alternative will not be developed by the time of the ultimate phase-out. We cannot leave our farmers in the lurch relying on blind faith and a promise that something will appear. However, I do believe that we must do our part to protect the protective ozone layer and to encourage industry to find ozone-safe products.

I believe that there is an answer out there to alleviate farmers' concerns without sacrificing the health of the ozone layer, and I look forward to working with the Chairman and the individuals testifying before us today to reach that solution.

Mr. BILIRAKIS. Our witness list consists of Mr. Rafe Pomerance, Deputy Assistant Secretary for Environment and Development, Department of State; Mr. Larry Elworth, Special Assistant Pesticide Policy, Natural Resources and Environmental of the Department of Agriculture; and the Honorable Mary D. Nichols, Assistant Administrator for Air and Radiation, U.S. Environment Protection Agency.

As per usual, your opening statements should be limited to as close as 5 minutes as you can get. I probably won't gavel you down, though, if you go over it by a minute or 2.

Why don't we just start off with Mr. Pomerance. If you would, please, sir.

STATEMENTS OF RAFE POMERANCE, DEPUTY ASSISTANT SECRETARY FOR ENVIRONMENT AND DEVELOPMENT, DEPARTMENT OF STATE; LAWRENCE ELWORTH, SPECIAL ASSISTANT PESTICIDE POLICY, NATURAL RESOURCES AND ENVIRONMENT, DEPARTMENT OF AGRICULTURE; AND HON. MARY D. NICHOLS, ASSISTANT ADMINISTRATOR FOR AIR AND RADIATION, ENVIRONMENTAL PROTECTION AGENCY

Mr. POMERANCE. Thank you very much, Mr. Chairman, members of the committee. It is a pleasure to appear before you this morning to discuss the most recent meeting of the parties to the Montreal Protocol which occurred in—I guess in December of last year in Vienna.

Before I go any further, I would just like to say that the Vienna meeting was a bit of a historical marker. It was the 10th anniversary of the Vienna Convention, which was the framework agreement in 1985 that led to the mechanism that we now have in place to protect the ozone layer; and, in a sense, this was a rather remarkable year, because two of the chemists who theorized that human-made substances would deplete the ozone layer far above the earth were awarded the Nobel Prize for chemistry for this year for their path-breaking work, which has, years later, been confirmed by atmospheric observations.

The second thing I wanted to say about the Vienna—the 10th anniversary—is that we have witnessed what most people consider the most successful or certainly one of the two or three most successful agreements to protect the environment that we have. It is a global agreement, because the cooperation of all governments is required to achieve the result. No one government can make this happen alone. And that is a dynamic that has run through the decisions that have been made over the years.

So, in a sense, we, the U.S. delegation—and I was accompanied by Mr. Elworth to my left—was present at a bit of a historical meeting. At that meeting, more than a hundred parties to the Protocol gathered for the seventh time in Vienna.

The Montreal Protocol, which is a subsidiary part, in a sense, of the Vienna Convention, was agreed in 1987 in Montreal. It was negotiated during the Reagan administration, and further amendments were agreed under President Bush.

Due in large measure to this continuing American leadership, the parties in Vienna adopted a series of actions which followed logically upon the control measures taken earlier in London and Copenhagen where the Montreal Protocol was amended to cover additional ozone depleting substances.

This problem—this environmental problem, as the President indicated in the State of the Union, respects no national boarders; and he said that I think in the context of one important element of U.S. foreign policy, which is protection of the environment and, in a global sense, for problems that know no border.

If implemented, the measures taken over these several meetings, including the one in Vienna, stand against the background of the latest scientific data; and this data details two things, one very hopeful, one very troublesome.

Hopeful data is that the Protocol is working. You can actually measure the effectiveness of the Protocol in the atmosphere, because scientists can predict that if countries obey the limits in the Protocol, atmospheric—the rates of buildup of the atmospheric gases that destroy ozone will begin to change. And that is exactly what has happened. We have seen the reduction in concentrations of one depleting gas and the reduction in the growth rates of others. This is a very hopeful sign, and I believe that the rates of changes in the atmosphere are consistent with the agreements that we have reached over the last 10 years.

The troublesome part is that ozone depletion has proceeded much faster than anyone expected a decade ago. This is because other atmospheric chemistry processes are at work that earlier scientific theory did not predict. And what is striking is that we have—I think it was well-known—one aspect of this is that we have a hole the size of North America over Antarctica, which reached its largest size in 1992 and 1993, and then depletion over midlatitudes in the southern and northern hemispheres has been proceeding very rapidly. In fact, the depletion is now going on at all seasons and has reached as far south as 30 degrees, which is—included a good portion of the State of Florida.

We did not expect many years ago that we would be seeing increased levels of ultraviolet of this magnitude due to ozone depletion over latitudes of that sort at this time. That, of course, has added urgency to the whole process of controlling ozone-depleting gases.

We are pleased at the State Department, of course, that the decisions of the Vienna agreement are consistent with the speech last week that Secretary Christopher made at the JFK School of Government to fully integrate environmental goals into our diplomacy.

Given the effectiveness, as I mentioned, that we see in the atmosphere in the Protocol in stemming the tide of ozone layer degradation by both reducing and phasing out the consumption of ozone-depleting substances, we view with dismay the introduction of H.R. 475 to repeal Title VI of the Clean Air Act. Enactment of such legislation would unravel the Montreal Protocol process, call into question the ability of the United States to fulfill its international obligations, and place the ozone layer into jeopardy once again.

Clearly the most crucial issue to be addressed at the meeting of the parties was the matter of additional controls on the agricultural fumigant methyl bromide. The agreement reached provides developed countries with phaseout—a schedule for phasing out in developed countries of consumption and production of methyl bromide by 2010, with reduction of 25 percent and 50 percent in 2001 and 2005.

The phaseout will be coupled with a critical agricultural-use exemption which will permit the use of methyl bromide for those applications for which effective alternatives are unavailable. This exemption, the parameters of which will be decided by the parties later this year, coupled with the appropriate changes to the Clean Air Act, should help to address the competitiveness concerns of American growers.

Furthermore, the agreement by developing country parties to freeze their consumption and production of methyl bromide in 2002 at the average of their 1995 to 1998 levels was a welcome development, given their earlier resistance to such controls.

The parties also debated the need to amend the control measures adopted in Copenhagen with respect to HCFCs, the transitional compound used as a CFC replacement.

In Vienna, we persistently counseled against changing the controllers' regime agreed to in Copenhagen in 1992. In our view, the slight environmental benefits associated with the radical changes advocated by the European Union were not worth the economic costs which the change would bring. What resulted in Vienna was simply a slight modification to the existing control regime.

With their acceptance of a 2040 phaseout, which would be prefaced by a freeze in 2016 at 2015 consumption levels, developing countries signed on to HCFC control measures for the first time. Just as the developing countries have acceded to a CFC phaseout in 2010 and now an HCFC phaseout in 2040, we can expect in the future their acceptance of a date certain for a methyl bromide phaseout.

I will not take this time to address some of the other decisions taken by the parties which bear on the implementation of the Protocol. That discussion is set out in my written submission to the subcommittee.

Mr. BILIRAKIS. Yes, if you would finish up, please.

Mr. POMERANCE. All right. Let me say one more thing. Thank you.

Before finishing my remarks, I would like to note about one other important element of the Protocol process. That is the Montreal Protocol Fund. This is a cooperative relationship struck in the London Agreements in 1990.

Essentially, the developed countries support the entire transition—or I should say parts of the transition—in developing countries through a fund that is now based in Montreal. We make grants through that fund to support portions of the cost of the transition to benign substances. It is a key part of the partnership to making this global agreement work. We view it really as a fairly inexpensive bargain.

What is unfortunate at the moment now is that, because we do not have a foreign operations appropriations bill or an EPA appropriations bill, we are now falling behind in our voluntary contribution to this fund. So we are hoping that we can get the moneys needed to keep that part of the whole process in place. We view it as a key to the success of this global agreement.

I look forward to answering your questions. Thank you very much.

[The prepared statement of Rafe Pomerance follows:]

PREPARED STATEMENT OF HON. RAFE POMERANCE, DEPUTY ASSISTANT SECRETARY, DEPARTMENT OF STATE

Mr. Chairman, I would like to thank you for giving me the opportunity to testify before your Subcommittee on the recently concluded meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer.

Early last month, more than 100 Parties to the Montreal Protocol gathered for the seventh time in Vienna, Austria, the city which gave birth to the Protocol's parent agreement, the Vienna Convention for the Protection of the Ozone Layer.

The scientific backdrop for this meeting was the "Scientific Assessment of Ozone Depletion: 1994". In this their most recent report, the world's leading atmospheric scientists observed substantial decreases of ozone during the course of all seasons at midlatitudes (i.e., 30°-60°) in both the southern and northern hemispheres. For example, in the midlatitudes of the northern hemisphere the decline averaged some 6 percent between 1979 and 1994. In addition, the scientists reported that the levels of ultraviolet radiation, a source of skin cancer, were elevated in the northern hemisphere at these latitudes in both 1992 and 1993. Moreover, the National Oceanic and Atmospheric Administration reported recently that ozone levels for the mid and high latitudes in the northern hemisphere were down 10-20 percent last winter over what was noted during the same months in 1979 and in the early 1980s. Last September, the World Meteorological organization reported that the ozone hole over Antarctica covered some 3.9 million square miles or approximately the size of all of Europe.

Despite this message of concern, the data also supports the view that the 1987 Montreal Protocol and its subsequent London and Copenhagen Amendments of 1990 and 1992, respectively, are on the right track in addressing the matter of ozone depletion, a problem which transcends national frontiers. In their 1994 study, the scientists asserted that actions such as the 1994 phase out of halons and the measures leading to the January 1, 1996 phaseout of CFCs, have stemmed the atmospheric growth rates of these substances. In a finding which further bolsters the Protocol's effectiveness, the experts have also identified an increase in the atmosphere of HCFCs, a substitute for CFCs, just as consumption and production of the latter has waned. In fact, last summer scientists reported the first actual decrease in the atmosphere of an ozone depleting substance. At that time, they noted a decline in the concentration of methyl chloroform, a solvent and cleaning agent, the production and consumption of which was also completely phased out under the Protocol at the start of this year following a 50 percent reduction in such production and consumption levels in 1994.

Given the effectiveness of the Protocol in stemming the tide of ozone layer degradation by both reducing and phasing out the consumption and production of ozone depleting substances, we view with dismay the introduction of H.R. 475 to repeal Title VI of the Clean Air Act. Enactment of such legislation would unravel the Montreal Protocol process, as well as call into question the ability of the United States to fulfill its international environmental obligations. The implications for the ozone layer would be ominous were this legislation to become law. As Secretary Christopher stated last week in his address to the John F. Kennedy School of Government: "Protecting our fragile environment also has profound long-range importance for our country, and in 1996 we will strive to fully integrate our environmental goals into our diplomacy..."

Very much aware of the latest scientific findings the Parties went to Vienna knowing that the struggle to restore the integrity of the ozone layer had yet to be concluded. In Vienna, they were faced with several crucial decisions aimed at strengthening the ozone layer. With the United States playing a pivotal leadership role, the Parties in Vienna adopted a series of measures which, if implemented, should lead to the restoration of the ozone layer by the middle of the next century.

The most pressing issue to be addressed at the Meeting of the Parties was the matter of additional controls on the agricultural fumigant methyl bromide. As the Committee may well know, the Scientific Assessment stated that "methyl bromide continues to be viewed as a significant ozone-depleting compound."

Prior to Vienna, only developed countries were subject to any strictures with respect to methyl bromide. In Copenhagen, the Parties agreed to a 1995 developed country freeze in their production and consumption of methyl bromide at 1991 levels. Developing country Parties were not subsumed within the purview of this freeze.

Our delegation at both the Meeting of the Parties, as well at the antecedent Preparatory Meetings, pressed for a universal phaseout in the production and consumption of methyl bromide by the year 2001.

As the Committee is well aware, the success of the Montreal Protocol process has, to date, been attributable in no small measure to the fact that the Parties have striven to operate on a consensus basis. Despite the fact that the Parties look to us for technical and policy guidance, the United States, like any other Party, is unable to impose by fiat its position on a given issue. Going into Vienna, only a few countries, like our Canadian neighbors, had accepted the need for a developed country methyl bromide phaseout by 2001; however, in Austria we were a lone voice positing the importance of a 2001 universal phaseout which would embrace both developed and developing country Parties. We supported this position for environmental considerations, as well as to help assure a level playing field for American growers. The European Union, for example, had established a community-wide negotiating position which was arrived at in October at a meeting of the Union's Environment Ministers. This position, binding on the 15 member nations, called for a 25 percent and 50 percent reduction in methyl bromide consumption and production by 1998 and 2005, respectively. With regard to a phaseout, the ministers agreed in principle to such a measure; however, they could not reach agreement as to a specific date certain.

In the developing world, there was, prior to the Seventh Meeting of the Parties, virtual unanimous opposition to the acceptance of any methyl bromide controls. The lone dissenter was Malawi which had agreed to endorse a developing country freeze.

In view of the foregoing, the odds of achieving a universal methyl bromide phaseout by 2001 were, despite the merits of our arguments, extremely long to say the least. We, however, working within the context of a small contact group consisting of representative of key developed and developing nations were able by stressing the arguments put forth by the Scientific Assessment Panel with regard to the science of ozone depletion and the Technology and Economic Assessment Panel (TEAP) with respect to the availability of alternatives, to move the process significantly forward. By dint of our perseverance, we succeeded in getting our developed country partners to accept a phaseout in their production and consumption of methyl bromide by 2010 with interim reductions of 25 and 50 percent, respectively, by 2001 and 2005. I would like to note parenthetically that the Parties retained the previously accepted preshipment and quarantine exemptions.

The Parties also agreed to couple the 2010 phaseout with a critical agricultural use exemption which will permit the production and consumption of methyl bromide for those applications for which an effective substitute is unavailable. The Parties directed the TEAP to study the parameters and modalities of such an exemption. This report will be presented to the Eighth Meeting of the Parties later this year in San Jose, Costa Rica. At that time, we hope to play an instrumental role in the final crafting of the terms of this exemption. The exemption, together with appropriate changes to the Clean Air Act to provide for the availability of methyl bromide for those uses for which no viable alternative exists, should address the competitiveness concerns of American agriculture.

An equally significant development was our ability to persuade our extremely reluctant developing country colleagues to sign on to methyl bromide control measures. They agreed to accept a freeze in 2002 at the average of their production and consumption levels for the 1995-1998 period. While these countries account for less than 20 percent of the methyl bromide consumed worldwide, their consumption levels, however, are growing.

I would like to underscore that the Parties will continue to review the matter of methyl bromide. The Parties in Vienna took a decision to examine the issue again in two years following the completion of a TEAP study on the availability of viable methyl bromide alternatives.

The Meeting of the Parties also addressed the question of amending the control measures adopted in Copenhagen with respect to HCFCs, the transitional compound used as a CFC replacement. In Copenhagen, the Parties agreed to establish cap which would serve as the baseline from which incremental periodic reductions leading to a 2010 phaseout would be predicated. At that time, the Parties set the cap at 3.1 percent of 1989 CFC consumption and 1989 HCFC consumption. In Vienna, the Parties decided upon a slight modification of this cap. As a result, the new formula will be 2.8 percent (vice 3.1 percent) of 1989 CFC consumption and 1989 HCFC consumption. In addition to this small lowering of the cap, the Parties agreed to limit the 0.5 percent level of baseline consumption from 2020-2030 to existing air conditioning and refrigeration equipment. While this small "servicing tail" was originally intended to ensure this use, prior to this, there were no specific restrictions.

In weighing these changes, it is important to note that the European Union's Environment Ministers, at the October ministerial meeting cited earlier in my statement, had reached a meeting of the minds with respect to the lowering of the cap to 2.0 percent and the acceleration of the phaseout by 15 years to 2015. The United States, in turn, posited the view that the high economic costs and minimal environmental benefits attendant to the European Union position only served to bolster the case for maintaining the status quo. In looking at what evolved out of the Vienna negotiation, it is fair to say that, save for some minor changes on the margins, the U.S. position with respect to HCFCs was sustained.

In Vienna, developing countries agreed for the first time to accept controls on their consumption of HCFCs, These countries, whose consumption of HCFCs is less than ten percent of the world's total, accepted a 2040 phaseout which would be prefaced by a freeze in 2016 at 2015 consumption levels.

The Parties, I note, have traditionally given the developing countries a grace period in which to comply with the control measures accepted by the developed countries. Just as the developing countries have acceded to a CFC phaseout in 2010 and now a HCFC phaseout in 2040, we can expect to witness in the future acceptance of a date certain for a methyl bromide phaseout.

The aforementioned control measures with respect to both methyl bromide and HCFCs are deemed adjustments and binding upon all the Parties six months after their circulation by the Depositary. In Vienna, the Parties did not approve any amendments to the Protocol which would require the advice and consent of the Senate. I have attached for your convenience a summary of the current phaseout schedule.

In addition to the adjustments discussed earlier in my statement, I would like to take this opportunity to briefly touch upon some additional decisions of interest to the United States which were taken in Austria. In a decision aimed at safeguarding the integrity of the Protocol, the Parties rejected the request of the Russian Federation, Belarus, Bulgaria, Poland and the Ukraine for a five-year grace period in which to comply with the CFC production and consumption phaseout for developed countries which went into effect on January 1 of this year. As a result of the decision taken by the Parties, the Protocol's Ozone Secretariat and Implementation Committee will be in a better position to monitor closely the progress being made by the Russian Federation to achieve full compliance with the CFC phaseout.

Of immediate interest to the United States, the Parties decided to grant "essential use" nominations to permit the production of CFCs for metered dose inhalers used by asthma sufferers and methyl chloroform for the Space Shuttle and Titan Rocket. The Parties approved all the nominations requested by the United States.

I would like to take this opportunity to briefly touch upon the Protocol's Multilateral Fund. The Protocol has gained virtual universal acceptance as a result of the creation in London in 1990 of the Montreal Protocol Multilateral Fund. The Fund was established to help countries, whose per capita annual consumption of CFCs was relatively low, to meet their phase out commitments under the Protocol. The developed world agreed to support the Fund because 1) assistance was limited to the incremental or "extra" phaseout costs; 2) aid was to be given only to developing countries whose historical consumption of ozone depletors was very low; and 3) the amount of the Fund was considered a small price to pay to protect the substantial domestic investments that developed countries had made to phase out ozone depleting substances. In effect, these countries, most of them very poor, were told that they would not be expected to solve a problem which was not of their making. The more than $430 million already allocated by the Fund for over 1,200 activities in over 80 developing countries is expected in due course to result in a one-quarter to one-third reduction of developing countries' current use of ozone depleting substances. Many developing countries are even phasing out their reliance on such substances ahead of the Protocol schedule. Thus, a relatively small expenditure of funds has the potential of generating a significant environmental dividend for the world community, as well as leveraging large sales for those American companies which export ozone-friendly equipment and technology. Unfortunately, the absence of fully funding EPA and Foreign Operations budget requests to Congress has left the United States some $23 million behind in its voluntary contribution to the Fund.

In conclusion, I would simply like to say that the meeting in Vienna was a negotiation, the outcome of which could not be preordained. In any negotiating process operating on a consensus basis, we cannot expect to achieve 100 percent of all of our stated goals. The measure of success, however, of any negotiation is whether at the conclusion of the meeting the United States can walk away from the negotiating table and say that its interests were advanced. With that in mind, I can state unequivocally that the Seventh Meeting of the Parties was a great success. The limits placed on methyl bromide and HCFCs in Vienna, along with the other control measures adopted heretofore by the Parties, will go a long way to remedying the many serious environmental and health dangers-posed by a depleted ozone layer.

Thank you Mr. Chairman.

Developed Country Phaseout Dates

Substance	Phaseout Date
Halons	1994
CFCs	1996
Carbon Tetrachloride	1996
Methyl Chloroform	1996
Methyl Bromide	2010
HCFCs	2030

Developing Country Phaseout Dates

Substance	Phaseout Date
Halons	2010
CFCs	2010
Carbon Tetrachloride	2010
Methyl Chloroform	2015
Methyl Bromide	?
HCFCs	2040

Mr. BILIRAKIS. Mr. Elworth.

STATEMENT OF LAWRENCE ELWORTH

Mr. ELWORTH. Thank you, Mr. Chairman.

The USDA appreciates your interest and work on this issue, and we also appreciate the opportunity to talk with you and members of the subcommittee this morning.

The importance of this issue for agriculture stems from two basic facts of life for farmers. First of all, profitable crop production depends on the ability to effectively manage a wide array of damaging pests. Effective and economic control of a number of pests is typically a precondition for the successful production, storage and trade of most crops.

Second, international competition has become a primary determining factor in the profitability of U.S. producers. Not only must U.S. growers rely on the ability to export farm products to international markets, they must often compete with foreign products in domestic markets.

Effective pest management and international competitiveness are important facts of life for farmers regardless of the availability of a specific control measure or the existence of a particular regulation. However, the role played by methyl bromide in agricultural production and trade has continued to be of significant importance and concern for U.S. agricultural producers.

Methyl bromide has provided a highly effective control for a broad spectrum of economically important pests that has led to its important role in preplant use, for example, in more than 100 crops. In addition, a number of commodities exported by the United States must be fumigated with methyl bromide in order to comply with the quarantine requirements of importing countries.

For example, the most critical quarantine use of methyl bromide for U.S. agriculture is its role currently in domestic use as the only practical emergency treatment to move commodity out of areas quarantined for outbreaks of exotic pests such as the Mediterranean fruit fly. In addition, there are U.S. regulations that require a wide array of imported food and nonfood commodities to be fumigated with methyl bromide before they can be brought into the United States.

While methyl bromide use has become a vital part of many agricultural operations, scientific evidence of methyl bromide's contribution to ozone depletion has led to both international and domestic controls on the production and use of the chemical.

The United States regimen under Title VI of the Clean Air Act, which requires a phaseout of methyl bromide by 2001, is more restrictive than the provisions for methyl bromide under the Montreal Protocol, which governs the actions of the rest of the world. In particular, the Protocol allows longer phaseout schedules and has provisions for essential uses and exemptions for quarantine and preshipment uses. United States farmers are, quite frankly, concerned that if adequate alternatives are not available, they will be put at a significant competitive disadvantage in international agriculture and trade when the U.S. phaseout actually takes effect.

In response to those needs of U.S. producers, USDA has directed its resources and expertise, with the support of Congress and in cooperation with growers, to conduct an ambitious research program to identify and develop alternatives to control those pests that are currently controlled by methyl bromide.

Spending for ARS research, in cooperation with the land grant universities on methyl bromide alternatives, has increased from $7.4 million in fiscal year 1993 to $13.9 million in the current appropriation for fiscal year 1996 at USDA. This research is augmented by research funding from grower groups and from EPA.

In addition to the identification of a number of promising options to our research programs, we are also working with EPA to increase cooperative work among research scientists and to provide for the expeditious review and registration of alternatives as they become available.

USDA recognizes that there are a number of real-world factors that affect our ability to find alternatives.

We recognize that a wide variety of crop applications spread over a diverse set of geographic conditions will have to be found and that no single practice or chemical is likely to substitute for all those uses.

We also know that a genuine alternative for farmers must be efficacious, cost-effective and available for efficient incorporation into their agricultural practices.

In addition, the approval process for a new use or a new product takes time for registrants to conduct and submit data and for EPA to review that data in approving the use.

And, finally, securing approval of quarantine practices by importing countries has typically taken years of negotiation.

It is important to remember that regulation under the Clean Air Act, Mr. Chairman, is only one of three major incentives for USDA to ensure that agricultural producers have additional alternatives to methyl bromide. The registration of pesticides under FIFRA may result in the loss of uses for reasons other than effects on the ozone layer. In addition, methyl bromide is currently the only effective and economical alternative for a broad number of crops, which puts growers in a tenuous position if resistance develops or if new pest problems arise.

For these reasons, as well as the impact of the Clean Air Act, it is important that USDA conduct an active and productive research program on alternatives.

I will summarize quickly, Mr. Chairman.

Despite the progress made in our efforts to develop alternatives, there remains a disparity between the Clean Air Act controls on methyl bromide in the United States and the controls affecting the rest of the world under the Montreal Protocol. As a result, USDA is very concerned that, if adequate alternatives are not available, U.S. farmers will be put at a significant competitive disadvantage in international agriculture and trade when the phaseout takes effect in the United States. For this reason, the Clinton administration has indicated its willingness to work with Congress and other stakeholders to craft a reasonable solution based on several really important principles.

First of all, the solution must protect American agriculture and trade from being put at a competitive disadvantage. Second, it must provide sound protection of the global environment. Third, it must retain the incentives for research on alternatives. Fourth, it must not result in a cumbersome or unworkable administrative process. And, finally, it must not undercut international agreements to which the United States is a signatory.

In addition, Mr. Chairman, if we are to reach a successful and responsible solution to this issue, we must limit any legislative action to the specific problem at hand. Any broader set of revisions to the Clean Air Act would hamper resolution of the problems faced by growers and would also be opposed by the administration.

Mr. Chairman, the Department of Agriculture has worked to ensure that we can continue the competitiveness and productivity of U.S. farmers while still ensuring protection of the global environment. It is our sincere conviction that we can devise a targeted legislative solution that will accomplish both of these objectives.

Again, Mr. Chairman, thank you for your interest and work on this issue; and I will be glad to work—to answer any other questions you or the subcommittee may have.

[The prepared statement of Lawrence Elworth follows:]

PREPARED STATEMENT OF LAWRENCE ELWORTH, SPECIAL ASSISTANT, UNITED STATES DEPARTMENT OF AGRICULTURE

Mr. Chairman, I appreciate the opportunity to discuss with you and other members of the Subcommittee the regulation of methyl bromide under the Clean Air Act and the Montreal Protocol. I also want to commend you for your interest in an issue that is of significant importance to U.S. agricultural producers and the global environment.

The importance of this issue for agriculture stems from two basic facts of life for farmers. First, profitable crop production depends on the ability to effectively manage a wide array of damaging pests. Effective and economic control of a number of pests is typically a precondition for the successful production, storage, and trade of most crops. Second, international competition has become a primary determining factor in the profitability of U.S. producers. Not only must U.S. growers rely on the ability to export farm products to international markets, they must often compete with foreign producers in domestic markets.

Effective pest management and international competitiveness are important facts of life for farmers regardless of the availability of a specific control measure or the existence of a particular regulation. However, the role played by methyl bromide in agricultural production and trade has continued to be of significant importance and concern to U.S. producers.

Methyl bromide provides highly effective control for a broad spectrum of economically important pests that has led to its important role in preplant use for over 100 crops. Its largest use is as a soil fumigant for intensive production of high value crops such as strawberries, tomatoes, cucumbers, peppers, melons, and eggplants. the 1993/94 value of production for these six commodities using methyl bromide for preplant treatment was $2.4 billion.

In addition, methyl bromide is particularly important for quarantine treatments because of its effectiveness against a large variety of indigenous and non-indigenous pests and because it can be easily and economically applied to both small and large shipments. A number of commodities exported by the United States must be fumigated with methyl bromide in order to comply with the quarantine requirements of recipient countries. For example, the most critical quarantine use of methyl bromide to U.S. agriculture is its role, currently, as the only practical emergency treatment to move commodity out of areas quarantined for outbreaks of exotic pest insects such as the Mediterranean fruit fly. In addition, U.S. regulations require that a wide array of imported food and non-food commodities be fumigated with methyl bromide as a condition of entry.

While methyl bromide use has become a vital part of many agricultural operations, scientific evidence of methyl bromide's contribution to ozone depletion has led to both international and domestic controls on the production and use of the chemical.

Because of the important uses of methyl bromide and their role in agricultural production and trade, the phaseout of methyl bromide in 2001 under Title VI of the Clean Air Act is of vital significance. This U.S. regimen is more restrictive than the provisions for methyl bromide under the Montreal Protocol that governs the actions of the rest of the world. In particular, the Protocol allows longer phaseout schedules and provisions for essential uses and exemptions. The difference between the domestic and the international regulations has caused a profound concern among agricultural producers, processors, and those engaged in international trade. U.S. farmers are concerned that, if adequate alternatives are not available, they will be put at a significant competitive disadvantage in international agriculture and trade when the U.S. phaseout takes effect.

The Department of Agriculture (USDA) has placed a high priority on dealing with agricultural concerns while contributing to the protection of the global environment. There are three areas in which USDA has worked to develop solutions that meet both of those needs in dealing with the methyl bromide issue.

I. USDA has directed its resources and expertise, with the support of Congress and in cooperation with growers, to conduct an ambitious research program to identify and develop alternatives to control the pests currently controlled by methyl bromide. USDA's Agricultural Research Service (ARS) has for many years devoted significant research resources to approaches with potential for replacing methyl bromide. Since the U.S. Environmental Protection Agency (EPA) announced the phaseout for methyl bromide through research on a variety of approaches which include; 1) new cultural practices, 2) improved host-plant resistance to pests and diseases, 3) biological control systems using beneficial microorganisms, and 4) less harmful fumigants. For postharvest treatment, alternatives being investigated include: 1) creation of pest-free agriculture zones, 2) physical methods such as hot or cold treatment or storage in modified atmospheres, and 3) alternative fumigants.

Spending for ARS research methyl bromide alternatives increased from $7.4 million in FY 1993 to the $13.9 million included in the current appropriation for FY 1996. This spending supports 42 scientists years involving 46 projects. This research is augmented by research funding from grower groups and EPA.

USDA recognizes that there are a number of real world factors that affect our ability to find alternatives. We recognize that a wide variety of crop applications spread over a diverse set of geographic conditions will have to be found and that no single practice will substitute for all those issues. We also know that a genuine alternative for farmers must be efficacious, cost effective and available for efficient incorporation into standard agricultural practices. In addition, the approval process for a new use or new product takes time for registrants to conduct and submit the required studies that EPA must review by the latest standards. Finally, securing approval of quarantine practices by importing countries has typically taken years of negotiation.

However, our efforts have already led to several promising options for preplant uses even though the search for quarantine options has not to date yielded a similar array of options. Significant progress has also been made in the development of technology to recapture and recycle methyl bromide used in fumigation chambers for postharvest disinfestation of commodities and quarantine uses. This has the potential to drastically reduce emissions to the atmosphere. Furthermore, research has led to possible advances in soil treatment application technology that also allow the reduction of emissions to the atmosphere and reduce environmental impacts.

Under Secretary for Research, Economics and Education, Dr. Karl Stauber, and ARS Administrator, Dr. Floyd Horn, have worked extensively with agricultural producers, land grant universities and ARS scientists to ensure that our research is focused on high priority needs. In addition, USDA has established a publication to inform growers and researchers about the latest progress in our research programs. USDA and EPA also have worked with growers to conduct international symposiums, in Orlando in 1994 and in San Diego this past November, where scientists working on methyl bromide alternatives have presented their results and developed cooperative projects to effective alternatives. Finally, USDA and EPA have created a task force to ensure the expeditious review and registration of alternatives.

It is important to remember that regulation under the Clean Air Act is only one of three major incentives for USDA to ensure that agricultural producers have additional alternatives to methyl bromide. The reregistration of pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) may result in the loss of uses for reasons other than effects on the ozone layer. In addition, methyl bromide is currently the only effective and economical alternative for many crops which puts growers in a tenuous position if pests develop resistance or new pest problems arise. For these reasons, as well as the impact of the Clean Air Act, it is critical that USDA conduct an active and productive research program on alternatives.

II. USDA has actively participated in the development of United States Government positions for international deliberations by the Parties to the Montreal Protocol. USDA worked within the delegation to help level the playing field for U.S. producers in the international arena, by pressing for a global phaseout at the Vienna meeting that would require that all countries meet the same standards. Although the Parties did not ultimately support that position, important progress was made. Developed countries agreed to a phaseout schedule and a freeze on developing country use was adopted. While these measures fell short of the U.S. position, they do represent a universal commitment to international controls and the first steps toward a worldwide phaseout.

III. Despite the progress made in international negotiations there remains a disparity between the Clean Air Act controls on methyl bromide in the United States and the controls affecting the rest of the world under the Montreal Protocol. As a result, USDA is very concerned that, if adequate alternatives are not available, U.S. farmers will be put at a significant competitive disadvantage in international agriculture and trade when the U.S. phaseout takes effect in 2001. For this reason, the Clinton Administration has indicated its willingness to work with Congress and other stakeholders to craft a reasonable solution limited to resolving the concerns for the competitiveness of U.S. agriculture and trade by assuring the continued availability of methyl bromide where it is needed because of the lack of acceptable alternatives. Any broader set of revisions to the Clean Air Act would hamper resolution of the problems faced by growers and would also be opposed by this Administration.

If we are to come to a successful and responsible solution, some important principles must be incorporated into any legislation. First of all, it must protect American agriculture and trade from being put at a competitive disadvantage. Second, it must provide sound protection of the global environment. Third, it must retain the incentives for research on alternatives. Fourth, it must not result in a cumbersome or unworkable administrative process. Finally, it must not undercut international agreements.

Mr. Chairman, the Department of Agriculture has worked diligently both domestically and internationally to ensure that we can continue the competitiveness and productivity of U.S. farmers while still ensuring protection of the global environment. It is our sincere conviction that we can device a targeted legislative solution that will accomplish both of those objectives. We are committed to working with you in Congress and other stakeholders to craft a reasonable solution to this problem.

Thank you again for your interest and work on this issue. I will be glad to respond to questions from you or other members of the Subcommittee.

Mr. BILIRAKIS. I think out of courtesy, Ms. Nichols, maybe we should recess at this point so that—rather than watch the clock—we can listen to you and we can concentrate on your testimony.

So let's just go ahead and break until 11:55. Appreciate it if everybody will come back by then.

[Brief recess.]

Mr. BILIRAKIS. Well, Ms. Nichols, I apologize. I guess we ought to get started. I thought a couple more members should be here for your testimony. But you are accustomed to this sort of thing.

Ms. NICHOLS. Yes, thank you, Mr. Chairman.

Mr. BILIRAKIS. And perhaps we will have some additional questions as well.

STATEMENT OF MARY D. NICHOLS

Ms. NICHOLS. Thank you, Mr. Chairman, for the opportunity to testify.

I won't repeat the remarks of my two colleagues who have covered much of the material. I would just like to repeat a comment that I think you and several others made in the opening, that the issue of the phaseout of ozone-depleting chemicals really has been a triumph of science, economics, and diplomacy; and it has also had a very strong history of bipartisan support.

We in the Clinton administration are proud of what we have been able to accomplish under the Clean Air Act in putting the ozone layer back on the road to recovery and preventing millions of cases of skin cancer or other serious illness. We have successfully completed the phaseout of CFCs, halons, methyl chloroform and carbon tetrachloride; and we have worked to secure an international agreement that would phaseout methyl bromide in all the industrial countries as well as freezing its use in developing countries. We remain committed to a phased program to also eliminate methyl bromide use in the United States.

At the same time, we also recognize that this chemical, as with the other successful programs that we have had, remains economically important and that there is a need to maintain the momentum toward the phaseout by a program of research, development of alternatives, and a carefully crafted legislative solution, where necessary, for the ability to maintain essential uses.

As you have heard from my colleague, Mr. Elworth, research on alternatives is under way. There is no single chemical that is able to replace all the uses of methyl bromide. We understand that there are many chemical and nonchemical methods that can effectively control a number of the pests for which methyl bromide is now used, but we also know that ongoing research on additional alternatives is needed and will likely result in a wide range of viable options.

The critical issue, of course, is whether technically and economically adequate alternatives for all these uses will be available in time when the 2001 phaseout arrives. I think in that regard it is useful to look at the experience in phasing out other substances.

Success with the phaseout of other ozone depleters in hundreds of different applications and industries has convinced us that by establishing a firm deadline for an ultimate ban but allowing a sufficient time before it takes effect the phaseout process creates real market incentives for the development of effective alternatives. With each and every one of these chemicals we have heard dire warnings at stages similar to where we are right now with methyl bromide that suitable alternatives would not be found in time; and, as we all know, the predicted consequences did not occur. Therefore, there is reason for optimism that a successful phaseout can be implemented for methyl bromide.

But I also need to point out that we also have had the ability to grant essential-use exemptions for these other chemicals; and where they were truly needed, as in the case of the Titan rockets or the medical inhalers, they have been granted; and ozone-depleting chemicals continue to be available for those very important uses.

Again, the last time I testified—and this was alluded to by several of the members who were here—we talked about what could be done to address the potential problem that by 2001 we would not have adequate alternatives. We have talked with a number of stakeholders about that issue since the last time I appeared here. We have discussed a number of issues ranging from how to maintain environmental protection and progress toward healing the ozone layer, to the question of international competitiveness.

These discussions were slowed, frankly, because of the negotiations in Vienna. I think a number of the parties wanted to wait and see what happened in the international negotiations; and, as you know, those have been concluded with an agreement that the developed countries would phaseout by 2010. As a consequence, we have begun again to consult with a group of affected parties; and while I am not in a position today to say specifically what the remedy will be, I can tell you that we do have a number of principles that we believe will guide an appropriate targeted response.

Mr. Elworth I think articulated them but, just briefly and perhaps in a slightly different form, we would say that we need to continue our progress on protecting the ozone layer; we need to not undercut the United States' international obligations under the Montreal Protocol; we need to maintain the availability of methyl bromide for those uses for which viable alternatives do not exist, as well as maintaining the incentive for research and development that would facilitate the quick testing and deployment of alternatives; and, last but not least, we need to ensure that any solution is administratively workable.

We have continued to meet within the administration, we are making progress I think on developing an approach, and we are looking forward to working with you and others on a bipartisan basis to create an appropriate remedy that would provide a timely solution when it is needed for the farm community while protecting the ozone layer.

In closing, I just need to say one last thing and that is that we believe that we do need to stay the course if we are to be successful in restoring the ozone layer. The United States has a history of leadership in the Multilateral Fund, in meeting our own phaseout commitments in some cases ahead of schedule, working to find alternatives and also marketing the very good technologies that we in the United States have developed abroad to our competitors as well; and we think that is an important fact that we need to be aware of.

So we thank you, and I am happy to answer any questions that you may have.

[The prepared statement of Hon. Mary D. Nichols follows:]

PREPARED STATEMENT OF MARY D. NICHOLS, ASSISTANT ADMINISTRATOR FOR AIR AND RADIATION, ENVIRONMENTAL PROTECTION AGENCY

Mr. Chairman, Members of the Subcommittee, thank you for the opportunity to testify before you on protection of the stratospheric ozone layer. The global phaseout of CFCs and other ozone-depleting chemicals is an unparalleled triumph of the soundest possible science, economics, and diplomacy. It rests on an overwhelming consensus within the world science community. One hundred and fifty nations have become parties to the Montreal Protocol, the treaty through which the phaseout policy is being implemented world-wide.

I am also pleased to say that protecting the ozone layer has had broad bipartisan support from the beginning. The original Montreal Protocol was negotiated and signed under President Reagan. President Bush was responsible for accelerating the phaseout of ozone-depleting substances, first in 1990 and again in 1992, and for expanding the list of regulated substances to include methyl chloroform, carbon tetrachloride and HCFCs, as well as for the creation of the Multilateral Fund (an assistance mechanism which helps developing countries phase out ozone depleting substances), which is critical to ozone layer protection. In addition, the original proposal to list and phase out methyl bromide occurred at the end of the Bush Administration.

I have been asked to focus primarily on implementation and enforcement of the 1990 Clean Air Act, with special attention to the Title VI provisions relating to stratospheric ozone protection. I will also briefly touch on the relevant decisions taken at the Seventh Meeting of the Parties to the Montreal Protocol (Vienna, December 1995), which will contribute significantly to global ozone layer protection. However, I expect that many details of this international meeting will be addressed by Mr. Rafe Pomerance of the State Department.

The United States and the world have made significant progress to date in addressing the erosion of the earth's protective ozone layer by eliminating many man-made, ozone-depleting chemicals. Production of halons was virtually eliminated by the world's developed countries in 1994 and at the beginning of this year, developed country production of CFCs, methyl chloroform, and carbon tetrachloride ended. As a consequence of these prudent international actions, the rate of increase of atmospheric concentrations of such chemicals as chlorofluorocarbons (CFCs), halons, carbon tetrachloride and methyl chloroform has slowed, and in some cases, declined. Scientists have proclaimed the Montreal Protocol a success, and the recent award of the Nobel Prize in Chemistry to Drs. Mario Molina and Sherwood Rowland, the discoverers of the ozone-destroying relationship between CFCs and the stratosphere, crowns their achievement with the recognition of the worldwide scientific community.

Nevertheless, the Antarctic ozone hole will persist well into the next century even *with continued compliance* with the Montreal Protocol. According to the 1995 Winter Summary of the ozone layer produced by the National Oceanic and Atmospheric Administration, the winter of 1994-95 produced ozone levels of 10-12% below normal above the northern hemisphere. Thus, despite our success, it is important to maintain forward progress. Full and complete restoration of the ozone layer will not occur unless there is a world-wide phaseout of these chemicals, including methyl bromide.

We have an incredible success story to tell with the work completed on Title VI of the Clean Air Act. We began the process of implementing Title VI by consulting stakeholders. Regulations have been drafted with the cooperative involvement of industry, scientists, consumers, and environmental interests. Throughout, sound science has been the basis for technical decisions. Regulatory Impact Analyses were completed and peer-reviewed. Benefits of reducing ozone-depleting substances far outweighed the costs, further supporting the need to put regulations into place swiftly.

To date, the Agency has promulgated regulations to phase out the production of ozone-depleting chemicals, to require recycling of refrigerants as well as the labeling of products made with and containing ozone depleters, and implemented a program to identify and promote the use of safe alternatives.

EPA is successfully implementing these regulations, with a high level of cooperation from industry and consumers. Over 600,000 technicians are certified to work on stationary refrigeration and air-conditioning equipment and can properly recover refrigerant from that equipment. EPA has approved 95 organizations to test and certify refrigeration technicians and has certified 70 refrigerant reclaimers, further encouraging the reuse of used refrigerants at a high purity level. EPA, along with other agencies such as the Department of Commerce's National Institute of Standards and Technology, continues to work with professional and trade organizations to update industry standards.

Compliance levels are high, notably in the refrigeration sector. Nevertheless, rigorous inspections have yielded results in enforcement actions against violators. On the civil side, EPA has filed 106 enforcement actions, with a total of $1.4 million proposed in penalties. Of those 106 cases, 28 have been settled, and a total of $94,000 collected.

EPA has put in place a marketable permit program that serves as the cornerstone of its regulatory program. By allocating permits or allowances to chemical producers, EPA can limit the volume of production of ozone-depleting chemicals. This restriction in supply rations these chemicals in the marketplace without costly controls. To date, about 585 million kilograms of CFCs and related substances have been traded through EPA's allowance system. This system has successfully allowed producers and importers latitude to vary from their baseline allotments, where a command and control system would have allowed no flexibility. Indeed, this approach, coupled with the excise tax on ozone-depleting chemicals, has been successful in minimizing the cost of the phaseout, encouraging innovative, creative, cost-effective industry responses.

We are seeing hundreds of new, never-before anticipated substitutes coming onto the market. New business opportunities are being realized. Several industries have switched to these substitutes before the required phaseout date. The electronics industry also deserves special mention for its success in achieving an early phaseout. Not only were U.S. telecommunications firms in the vanguard of companies that stopped using CFCs prior to the phaseout, but they also managed to turn the phaseout into an opportunity for improved industrial excellence—both in terms of enhanced competitiveness, as well as sustained commitment to the environment. These achievements were possible because the regulations implemented under Title VI of the Clean Air Act have met our basic philosophy, that given appropriate incentives, time to react, and a clear phaseout schedule, the market can react swiftly and flexibly to accommodate environmental goals.

In the face of this success story, I am dismayed by Congressman Delay's proposal to entirely repeal the ozone layer protection provisions of the Clean Air Act, and by Congressman Doolittle's proposal—only one step less drastic—to rollback the CFC phaseout deadline to 2000. These proposals would be disastrous to the ozone layer and to the health of the American people. They would exalt fringe views on science and economics over the international scientific consensus. They would wreak havoc in industries that have invested very large sums of money, talent, and effort in carrying out the smooth transition away from CFCs. Finally, they would put the United States in violation of the Montreal Protocol and break faith with other nations that, under that treaty, have done their part in the global effort to protect the ozone layer.

I'd like to turn now to two of the more recent additions to the Montreal Protocol, the class II compounds, the Hydrofluorocarbons (HCFCs) and methyl bromide. HCFCs were first controlled by the Montreal Protocol in 1992. These substances have a low ozone-depleting potential, and have been used largely as transitional replacements for the more harmful CFCs. During the Seventh Meeting of the Parties, the Parties agreed to a very slight change in the controls on HCFCs. While Mr. Pomerance can discuss the details of that change, from a domestic standpoint, I would like to inform the Subcommittee of our belief that full implementation of the current HCFC regulations will provide us with sufficient reductions to facilitate full compliance with the provisions of the Protocol as adjusted in Vienna. Accordingly, while we will continue to closely monitor compliance, as things stand now, we do not believe that it will be necessary to change the existing regulations.

Unlike some other ozone-depleting substances, whose production stopped at the beginning of this year, methyl bromide is slated for phaseout under the Clean Air Act by 2001. Because of the economic issues involved, there is great interest in the phaseout of methyl bromide. I want to clarify what has been decided by Parties to the Montreal Protocol, and subsequently by EPA. Then I will briefly outline decisions taken recently in Vienna by the Parties to the Protocol.

First, let me stress that anthropogenic methyl bromide is contributing importantly to the depletion of stratospheric ozone. In fact, because of its bromine chemistry, it is actually more effective at depleting stratospheric ozone than comparable quantities of CFCs. Without phasing out methyl bromide, it will not be possible for the world community to fully address the problem of ozone depletion.

In 1992, a UNEP peer-reviewed international scientific assessment was completed by over 200 scientists, concluding that the best estimate of the ozone-depleting potential (ODP) for methyl bromide was 0.7. At the 1992 meeting of the Parties to the Protocol, methyl bromide was listed as a class I substance and the Parties agreed to freeze developed country production in 1995 at 1991 levels, with exemptions for the use of methyl bromide in quarantine and preshipment. In compliance with the Protocol and the Clean Air Act, EPA listed methyl bromide as a class I substance in December 1993, with a phaseout date of January 1, 2001, the maximum time allowed by the statute.

The 1994 UNEP Scientific Assessment of Ozone Depletion, peer-reviewed by over 250 scientists, found that the ozone-depleting potential for methyl bromide is 0.6, and, indeed, the Parties to the Protocol agreed formally in Vienna to change the ODP of methyl bromide to reflect this value. The range of uncertainty would bring it to no lower that 0.3 and no higher than 0.9. Even the lowest end of this range exceeds the 0.2 threshold that makes a chemical a class I ozone depleting substance that must be phased out under the Clean Air Act. The 1994 Science Assessment states that "Methyl bromide continues to be viewed as a significant ozone-depleting compound." The Assessment also stated that the elimination of anthropogenic methyl bromide emissions is the single most effective policy to further reduce ozone destruction over the next several years.

In addition to being an ozone depleter, methyl bromide is a highly toxic pesticide. It is classified by EPA as a Category I pesticide on a scale of I-IV, with I being most acutely toxic for short-term, acute health effects. It is an acute neurotoxin, and even in relatively small doses can produce death, and irreversible damage to major organs, like the liver and kidneys. As a result, it is controlled as a restricted use pesticide, to be used only by trained and certified applicators or persons under their direct supervision. The pesticide is currently being supported for reregistration under the 1988 amendment to FIFRA, with the last reregistration data scheduled for submittal in late 1997.

Research into alternatives to methyl bromide is, of course, already under way, and experience so far has shown that there may be no single chemical able to replace all the many uses of methyl bromide. Alternatives to methyl bromide are often pest-specific, and can reduce pest levels when used as part of an overall integrated pest management program. Numerous chemical and non-chemical methods exist today that may effectively control many of the pests on which methyl bromide is now used. Ongoing research on additional alternatives will likely result in a wide range of options. Viable alternatives need not be identical to methyl bromide, but they must effectively and economically manage pests now being controlled by methyl bromide.

In the long run, the critical issue, though, is not whether technically and economically adequate alternatives for all methyl bromide uses are available now, but whether they *will be* available by the time the phaseout deadline arrives. When considering concerns about the availability of alternatives to methyl bromide, it is important to reflect on our experience in phasing out the other ozone-depleting chemicals. Our success with the phaseouts of CFCs, halons, carbon tetrachloride, and methyl chloroform—which have been or are being eliminated in hundreds of applications by dozens of industries—shows that the phaseout process works. By establishing a firm date for an ultimate ban, but allowing a period of time before it takes effect, the phaseout process creates market incentives for producers and users to develop effective alternatives.

With each of these other chemicals there were dire warnings at similar stages in their phaseout schedules that suitable alternatives would not be found in time. For example, several years ago, the fire protection industry expressed grave doubts that substitutes would be available in time for the halon phaseout and painted alarming pictures of what could happen without halon to extinguish fires. In fact, the 1994 phaseout of halons has been extremely smooth, with viable substitutes available before the phaseout. There have been none of the predicted dire consequences. The same is proving true for CFCs and the other chemicals. There is reason for optimism that the phaseout process will work for methyl bromide.

The recent Methyl Bromide Technical Options Committee Report, prepared under the Montreal Protocol, identified "a technically feasible alternative either currently available or at an advanced stage of development" for a large number of methyl bromide uses. This does not mean that alternatives are currently commercially available for each methyl bromide application. Many alternatives need further refinement and testing in the field for specific applications. But the Committee's statement does reflect the wide range of possible alternatives that can be further evaluated and developed in order to be available prior to 2001.

For example, there has been significant progress already in the search for viable alternatives to methyl bromide. Just in the past year, the agricultural research community has become significantly interested in a chemical called methyl iodide. Field research results on methyl iodide as a soil fumigant conducted by the University of California and the University of Florida look very good as far as efficacy goes, and it is apparently easier to handle than methyl bromide. EPA is currently investigating the toxicological issues involved with this substance, but we do know that methyl iodide is not an ozone depleting compound. In addition, several large pesticide manufacturing firms have approached EPA on the issue of registering this material as an alternative to methyl bromide. In the next six months we hope to have more definitive information on this compound.

Another area that looks very promising as a replacement for methyl bromide in the fumigation of mills and other food processing facilities is a combination treatment of very low amounts of phosphine with hot carbon dioxide. This pest control method has now been tested in a number of real world situations, and may actually be more effective than methyl bromide in some applications, and is an excellent way to reduce over all pesticide usage. This method is already competing in the market.

In these and other similar cases, the alternative was developed with very intensive research on the economic target pests at the on-farm level. This illustrates how important it is to consider the real world conditions growers deal with on a daily basis. It is critical in the coming years that there be a very good linkage between work on alternatives in the laboratory and how well the alternatives work on the farm. It is paramount that research on alternatives to this pesticide be well supported by clear incentives that guide both researchers and those considering an investment into an alternative pest control tool.

In addition to the alternatives already identified, it should be clear that in the years before 2001, additional substitutes and alternatives will be available. However, as I stated in my testimony before the Commerce Committee last August, we fully recognize that there is no guarantee that acceptable alternatives will be available for all uses of methyl bromide before 2001. Accordingly, we support the creation of an appropriate legislative remedy to ensure the availability of methyl bromide for those uses after the 2001 phaseout.

It is often lamented that no "silver bullet," no single effective replacement, has yet been found to duplicate methyl bromide's action across the board as a general biocide. However, in approaching pest control in agriculture, it may be even more valuable to develop, as a result of research and development into alternatives, a tool kit that contains an expanded set of options. This increases a farmer's flexibility, and resulting cost competition among various options can only benefit American agriculture.

In the months since my last testimony, we initiated discussions with a number of stakeholders to discuss a variety of issues ranging from environmental protection to international competitiveness. Further, since I last testified, the U.S. participated in the 7th meeting of the Parties, where a decision was taken to strengthen global controls on methyl bromide by requiring, among other things, a developed country phaseout by 2010. As a consequence of our earlier discussions and the Protocol decision, we are again participating in a process of consultation both within the Administration and with a wide range of affected groups to develop an effective legislative remedy.

While I cannot, at this time, tell you all the details of that remedy, I can tell you that we do have a number of key principles that we believe should guide an appropriate response. Those will include: protecting the ozone layer, in order to protect the health and environment of the American people; ensuring that any solution does not undercut U.S. international obligations under the Montreal Protocol; meeting the needs of American farmers by maintaining availability of methyl bromide for those uses for which effective alternatives do not exist; maintaining incentives for research and development to facilitate the quick testing and deployment of alternatives; and ensuring that any solution is administratively workable, and minimally burdensome and bureaucratic.

It is important to recognize that this is a specific problem that should be addressed on its own. Our goal is to provide a concrete and timely solution for the farm community, while at the same time protecting the ozone layer. Linking this issue with other Clean Air Act amendments that the Administration opposes would hinder, not help, efforts to resolve the legitimate concerns of the farm community and other affected interests on this specific issue.

When measured against these criteria, I must say that we would not be able to find the bill introduced by Congressman Miller in August of 1995 an acceptable solution. This bill would return to the regulatory structure of the 1950's and 1960's by overriding both the Clean Air Act and the Federal Insecticide, Fungicide and Rodenticide Act and returning effective control over this pesticide to USDA. The bill would place the U.S. out of compliance with the Montreal Protocol, through which the U.S. has achieved unprecedented international cooperation to protect the ozone layer under Presidents of both parties. It would replace the innovative, market-driven phaseout process which has worked flexibly and successfully for other ozone-depleting chemicals with a complicated "command and control" regime requiring specific rulings for thousands of current methyl bromide uses. That being said, we fully support the creation of an appropriate remedy in accordance with the principles I outlined a moment ago, and we are also committed to implementing the methyl bromide reductions as flexibly and cost-effectively as possible, as we have done with other ozone-depleting substances.

I have touched on several important aspects of EPA's stratospheric protection program. One major point is worth reiteration. We must stay the course if we are to be successful in restoring the ozone layer. We must continue our leadership role in the Multilateral Fund, meet our phaseout commitments as a Party to the Montreal Protocol, and work to find alternatives to methyl bromide. Thank you, Mr. Chairman, Members of the Subcommittee for your attention. I would be happy to answer any questions you may have.

Mr. BILIRAKIS. Well, thank you, Ms. Nichols.

Let me ask you a couple questions, if I may.

We all know that the President signed H.R. 325, which repealed the Clean Air Act requirement for employer trip reduction programs, and he also signed highway legislation affecting the vehicle inspection and maintenance program. Today you say methyl bromide is a specific problem, and should be addressed on its own. Do I interpret you then to mean that EPA can now support limited, targeted amendments to the Clean Air Act in principle?

Ms. NICHOLS. We have said that with respect to this particular issue in Title VI, the fact that there is no legislative mechanism available in the Act, that we are ready to work with the Congress to develop a careful solution that meets the principles that I have articulated.

Mr. BILIRAKIS. Well, I think we are all concerned about meeting the principles, but I guess every one of those principles, depending on how it is applied, can become a real obstacle to any discussions. You have no thoughts or any suggestions at this point then on how far the administration might be willing to go regarding methyl bromide?

Ms. NICHOLS. I don't know how I can be too much more specific at this point, because we think it is important that both we and the Department of Agriculture meet with a broad group of stakeholders. There are, obviously, a large number of users of methyl bromide who are in different economic situations.

We also want to make sure that we have consulted with others who have been very actively involved in the ozone depletion issue, including the scientific community, the technical community, and people from the advocacy community who have been very, very strong with their international efforts on this area to make sure we have met the criteria in any solution we would propose.

Mr. BILIRAKIS. Well, does it concern you that, under the Vienna agreement, Mexico will only be subject—and the gentleman from California who is not here at this point made this point—but Mexico will only be subject to a freeze on methyl bromide at the 1995 through 1998 levels, while the U.S. is limited to 1991 baseline with a 100 percent phaseout?

And, you know, it doesn't take a rocket scientist to figure out how to meet the 1995 to 1998 levels. All you do is just accelerate things and build on it and increase that baseline. And I would suggest that that is something that probably Mexico would do.

Do you have any thought on that?

Ms. NICHOLS. Mr. Chairman, I would defer to Mr. Elworth in terms of the Mexican agriculture. I don't purport to be an expert on that topic, although I do understand that methyl bromide is a somewhat expensive product which might not be as attractive in a place where perhaps labor costs are cheaper than they are here.

But not getting into that issue, just in terms of the competitiveness issue, I would note that the last time that we appeared before this committee and the oversight committee on the Title VI question, the growers who participated in that hearing said that they believed that an essential use exemption would solve the competitiveness problem. That is, they accepted the notion of the phaseout; and they felt that if there were an ability to have essential uses exempted from that phaseout that that would solve the problem from their perspective.

Mr. BILIRAKIS. All right. Do you feel that EPA has the authority under the Clean Air Act to determine what essential use exemptions are and to proceed further in that regard?

Ms. NICHOLS. Well, Mr. Chairman——

Mr. BILIRAKIS. You would like that authority if you don't have it; isn't that correct?

Ms. NICHOLS. Yes. I think what I would like to say is that, as we have indicated, we believe that a legislative direction in that regard is needed. But I would say that if for some reason Congress were unable to pass such an essential use exemption and we were confronted with the sort of crisis that has been predicted that we would try to find a way administratively to act on it.

Mr. BILIRAKIS. Okay. And I am not meaning really to put you against the wall. But you are basically saying that, since EPA believes that that is a necessary tool, that if the Congress feels strongly that the Clean Air Act does not contain appropriate language that you would like to see appropriate language?

Ms. NICHOLS. Yes, sir.

Mr. BILIRAKIS. My time is expired. We may have a second round, depending on how we go along here.

Mr. Stupak.

Mr. STUPAK. Thank you, Mr. Chairman.

Mr. Elworth, do I understand your testimony? Your department views methyl bromide as a vital soil fumigant for over 100 crops and it brings in something like $2.4 billion to the U.S. farmers and yet, in the same testimony, you indicate that we are only spending about 13.9 to find alternatives, $13.9 million for research in 1996 to find alternatives to methyl bromide? Is that adequate money? What else can we do to expedite the phaseout in the U.S. without hurting our farmers?

Mr. ELWORTH. We have largely done a lot of that methyl bromide research by redirecting as well as using direct appropriations from

Congress. Do we believe that that will, in fact, get us—that we can guarantee that we will have alternatives by 2001? I think it is rather unlikely that we could guarantee that.

There are other things that we can do. We have spent a lot more time working directly with the grower groups to help set some more specific priorities on the short-term needs that we have.

But we are looking, in many cases, at a very, very complicated situation. As I stated in my testimony, we don't think that we—I don't think anyone believes that we are likely to come up with a single substitute. In many cases, we are finding substitutes on specific crops for two or three of the important pests but not for the remaining one or two pests that still need to be controlled.

Mr. STUPAK. You indicated that you have taken money directly and indirectly. So the research money that has been granted to you in the 1996 budget is what? About $13.9 million or so? Is that adequate or not?

I am not saying throw more money at the problem, but I am saying if we are going to have this phaseout period at 2001, then you have the adequate resources to help develop an alternative. I think we all want to protect the ozone, protect the environment, protect human health; but, at the same time, you don't want to cut yourself short.

Mr. ELWORTH. We have no indication that our research programs will provide alternatives for all of the current uses of methyl bromide. We don't have—we just have no indication as to exactly where we will be at that point.

I would point out, also, that developing the research is only one part of it. We also need to conduct the technology transfer; and, in some cases, we may or may not need approval either from the Environmental Protection Agency or from the importing country.

Mr. STUPAK. Okay. And as far as technology transfer—and maybe you are not the correct one to answer this one. But I understand in the Northwest, where they use this fumigant, they have recycling chambers like where they basically catch about—almost close to 100 percent. Is that a feasible alternative to continue to use this fumigant, soil fumigant, and then try to recycle it so we do not hurt the environment and the ozone? Is that an alternative, feasible, that we can continue to use it after 2001?

Mr. ELWORTH. It is an alternative that we pursued, because we do think it does provide environmental benefits. It also provides for more efficient use of methyl bromide, which of course is important to the storage operator or to the grower. But that doesn't really have a bearing on the Clean Air Act situation, since the Clean Air Act does not regulate emissions as much as it regulates production and use.

Mr. STUPAK. All right.

Mr. Chairman, I will yield back my time. Thank you.

Mr. BILIRAKIS. I thank the gentleman.

Mr. Burr.

Mr. BURR. Thank you, Mr. Chairman.

Mr. Pomerance, in Copenhagen, you said that the parties agreed to a 1995 developing country freeze in their production and consumption of methyl bromide at 1991 levels. Now, if I remember correctly from the hearings that we have had prior with many of you, there were about 156 original signing countries to the Montreal Protocol. Am I close on that number, Ms. Nichols?

Ms. NICHOLS. Yes.

Mr. POMERANCE. I don't know the exact number.

Ms. NICHOLS. I use 150. So, rounding it off——

Mr. BURR. Okay. To date, on the Copenhagen meeting, how many countries have signed the changes that were talked about in Copenhagen?

Mr. POMERANCE. About 40 to 50, including most industrialized countries.

Mr. BURR. So, right now, we have got two-thirds of the original participants in the Montreal Protocol who some 60 to 90 days since that meeting are not to an agreement on what was agreed to there—or supposedly agreed to there, enough that they have signed what took place. Am I understanding it correctly?

Mr. POMERANCE. Yes. In general, it takes some years after an amendment is agreed for everyone to have ratified.

Mr. BURR. You said in your testimony, I don't know whether it was out of the written part, the cooperation of all is needed to accomplish the goal that we are after; and I have got to ask you, do you really believe that when two-thirds of the individuals who signed the original Protocol have not signed any amendments to it or additions, whatever we want to call them, that we have the cooperation needed to accomplish the end goal?

Mr. POMERANCE. Well, the—I think, as I said, that, first of all, there are different rates of ratification of amendments.

Now, I—from all that I know of about the implementation of this, the entire spectrum of agreements under the Vienna Convention, including the Montreal Protocol and the two amendments, we are witnessing cooperation across the board. We have a wide-scale technical assistance program the EPA works with many governments on. We have the Montreal Protocol Fund. There is work going on globally at all levels to implement and make the trans—implement the Treaty and make the transition to benign substance.

We have not seen evidence——

Mr. BURR. Let me go back to the question, if I may. Given that you believe the cooperation from all parties is needed to meet the stated goal, is having two-thirds of the individuals not sign on to those proposed changes, in your estimation, the cooperation that you are looking for?

Mr. POMERANCE. Well, I suppose that we would like to have as rapid ratification as possible. And——

Mr. BURR. Like to have and have are two different things.

Mr. POMERANCE. But it takes different time for different governments, depending on the urgency of a particular instrument in a government.

Now, if we begin to see signs that governments are falling back on their commitments, then we will put—we would then urge them to come into compliance. So as time goes on, if there are particular examples of governments that haven't ratified key amendments, we would then urge them to do so.

Mr. BURR. You also——

Mr. POMERANCE. There would be a process of bringing international pressure to bear.

Mr. BURR. What type of international pressure?

Mr. POMERANCE. Well, generally—it is generally in the form of political pressure, public pressure, through the parties. The parties, governments can, through diplomacy——

Mr. BURR. We would politically pressure countries?

Mr. POMERANCE. You can use a number of things you could do to come into compliance with a particular amendment. I mean——

Mr. BURR. Let me ask about one of our neighbors, because you pointed that out in your testimony that, in fact, Canada went to Copenhagen and lobbied for a phaseout in 2001. Does Canada have a similar law on the books to what our Clean Air Act says, that we will eliminate the use of methyl bromide in the year 2001?

Mr. POMERANCE. I don't know what the Canadian domestic law is on implementing the Protocol or the amendment, but I assume that if the government of Canada made a public commitment to phaseout in 2001 they were prepared to live up to that.

Mr. BURR. Well, I can assure you that, according to the GAO report, that is not the current situation in Canada.

Mr. POMERANCE. Well, they might undertake to implement it after making an international commitment. You can implement it ahead of time or afterward as a government.

Mr. BURR. Mr. Chairman, I hope we do have——

Mr. BILIRAKIS. Ms. Nichols is chomping at the bit to respond.

Ms. NICHOLS. I am sorry. I did just want to add one point, not on the international agreement situation but just to point out that the countries that have signed already, although they are not the entire group, do represent over 90 percent of the actual methyl bromide consumption and production in the world.

Mr. BURR. Would that not be to date under current percentages?

Ms. NICHOLS. Of the baseline—of the baseline that we are attempting to deal with today.

Mr. BURR. And do not the individuals involved in these negotiations believe that the increase in developing countries would be so significant in the future that they went ahead and tried to put into this agreement that, in fact, we would use 1995 through 1998 on developing countries to set their baseline?

Ms. NICHOLS. There was a very strong consensus on the need to limit the increase in use in the developing world, absolutely.

Mr. BURR. Okay. Last question, Mr. Chairman.

Ms. Nichols, I believe that the intent was probably well intended, but would it not be advantageous for Mexico to aggressively increase their purchases and use of methyl bromide between 1995 and 1998 to make sure that their base level was such that it would meet their future expected needs and still typically live within the framework of what I think is a very loosely drawn agreement that we have signed?

Ms. NICHOLS. Let me answer only by giving an example that may be helpful. We had a similar experience with respect to developing countries and the use of refrigerants.

China, fastest growing market for refrigerators in the world. Imagine what happened if every Chinese home bought a refrigor with CFCs in it. It would wipe out our ability to do anything effective about the ozone layer. Economically speaking, why shouldn't they ramp up production?

And yet, partly I think because of the international pressure and partly because the Montreal Protocol Fund made technical assistance available and there were possibilities for alternatives, the work has gone forward with CFC-free refrigerators being marketed successfully and being the hottest selling refrigerators in China. I had an opportunity to see for myself several years ago.

I think that you are right, that you could argue that there would be an incentive for people to ramp up under a situation where there is no limit until a period of time in the future. I think—and others have more expertise on this than I do—that there are some costs to switching to methyl bromide, too, that might make the agricultural sector decide that it wasn't worth their while to do the kind of flat-out increase that you are talking about.

But, in any event, there is a cap that is designed to make sure that there is some equity across the board there. And, after all, the U.S. is, with 40 percent of the total use in the world, in a somewhat difficult position there to argue that no one else should be allowed to increase.

Mr. BILIRAKIS. Ms. Nichols, I thought you might be responding to the Canada situation but, very quickly, do you know if Canada has enacted legislation, internal legislation to meet the 2001——

Ms. NICHOLS. No, I don't.

Mr. BILIRAKIS. You do not.

Ms. NICHOLS. No. I can check it and get back to you.

[The information follows:

No new legislation is needed in Canada to implement a methyl bromide phaseout. Existing legislation under the Canadian Environmental Protection Act provides statutory authority for Environment Canada to develop regulations to implement a methyl bromide phaseout. Canada supported a 2001 at the Seventh Meeting of the Parties to the Montreal Protocol in November 1995. Regulations are now being drafted for a methyl bromide phaseout.

Mr. BILIRAKIS. All right. Mr. Hall.

Mr. HALL. I thank you, Mr. Chairman, and I thank Ms. Nichols for her reference to alternatives. I want to ask, address a question to Mr. Pomerance. On page 11 of your written and prepared statement that you did not get around to addressing, you relate the metered-dose inhalers, and I am worried about a phaseout and elimination of certain products, whether or not there are alternatives when you phase them out. I guess the rational is the marketplace will come up with an alternative quote, in time, unquote.

I think when we are talking about CFCs for air-conditioners and cleaning solvents—I think you ought to address that—and I am concerned most if the same line of thinking would be used for metered-dose inhalers, not a big item, but it is so very important to people. We are not talking about a comfort item like air-conditioners and other things; you are talking about lifesaving pharmaceuticals. It is not a big issue, but it is very important, I think, to get it nailed down as to what the intent is.

Can you kind of put my mind at rest and give me some assurance that our negotiators at the Montreal Protocol meetings will ensure that the alternatives are available for CFCs and metered-dose inhalers before CFCs are scheduled for termination?

Mr. POMERANCE. Well, Mr. Hall, I think that we were successful at this last meeting in getting a special—an essential use exemption for continued use of CFCs in this critical area of—to protect the health of individuals who are suffering from particular problems. There is a process in the—under the Montreal Protocol to grant essential uses, there is an application process of technical review, and I think that virtually everyone who has been part of that process has been quite satisfied that if there is that real need, the parties have granted those essential uses. However, we hope that the industry will continue to work on substitutes because once there are demonstrable substitutes, then it becomes much more difficult to continue essential use permits.

So there is sort of a two-step process. One is if the use there is no substitute for, in such a case, then the parties have granted those exemptions. At the same time, there is an incentive for the market to come forward with substitutes, because if there are viable substitutes, the Protocol and its amendments create incentives for the development of those.

Mr. HALL. Well, I think the parties to the Protocol directed the Technology and Economic Assessment Panel to consider options for what it called the transition strategy for metered-dose inhalers. I am concerned that the term transition strategy might be shorthand for ending the use of CFCs. And I guess I am asking you what assurance can you provide this subcommittee that patient welfare will not be compromised by the process; and specifically I am concerned about the full range of medications that remain available to those that are suffering from asthma and allergies, and that the availability of low-cost generic equipment will not be disrupted. Give me some assurance on that, and tell me where I can find it.

Mr. POMERANCE. Well, I am worried about it, too. It is a reasonable question.

All I could say is that I think, based on our experience with the operations of the Technical and Economic Advisory Panel to the parties of the Montreal Protocol, based on the essential use applications to date, there has been a very reasonable response to the appropriate application. So the process has worked well so far, to the satisfaction of the applicants. Overall, there have been some things that have been turned down, but that is based on assessment of whether substitutes are available.

So I think that the best answer to your question is to look at the record of the Montreal Protocol process on essential uses, and it is a very good one. It is a tough thing to administer because you are dealing with many, many governments, but it has worked and I have seen it, seen the decisionmaking process. The U.S. has played a critical role in that technical evaluation process, our representatives on the various committees, and I mean we will do so in the future. It is very important to us.

Mr. HALL. With no criticism directed to anyone, I am concerned that there are some fine well-intentioned but overzealous civil servants at the Environmental Protection Agency that have on some occasions advocated a phaseout and elimination of certain products, whether or not there are alternatives.

I just want to know that there is an alternative here, and you dressed it and you stated in your printed remarks, that, of essential interest of the United States, a party decided to grant essential use nominations to permit the production of CFCs for metered-dose inhalers used by asthma sufferers, and methyl chloroform for the space shuttle and Titan rocket, and you addressed that. The parties approved all the nominations requested by the United States. Was that requested by the United States and approved?

Mr. POMERANCE. Yes, sir.

Mr. HALL. So we have that exception and you are not going to remove from the drugstores and the small towns and big towns——

Mr. POMERANCE. No.

Mr. HALL. All right.

Mr. POMERANCE. But let me address one other point about employees at EPA. I mean the subject of Federal employees and civil servants has been on the national agenda lately, and I have to say I have worked on this problem for a long time, and I can think of no program run by the EPA, or in terms of its technical application, that has received greater praise than on this; and this staff and the political leadership over the years has done a fabulous job on this issue, I think, and it has been widely praised. That is really to the credit of the people that have been running it on a day-to-day basis. So I think they deserve a lot of credit of running a highly successful technical program of industrial change.

Mr. HALL. I am willing to give them the credit. I just don't want to see these things lost in the shuffle shuttle. I passed an act in the Texas Senate one time that provided help for people who were disabled people under 50. And when the folks that wrote the report language—when you got through reading that, if you were strong enough to apply for it you weren't eligible. And we don't want to get caught in that situation.

Mr. BILIRAKIS. The gentleman's time has expired. Mr. Norwood.

Mr. NORWOOD. Thank you, Mr. Chairman, and I thank you ladies and gentlemen for being here. I would ask your indulgence, if my first question could be asked and simply answered with a yes or no or I don't know, so I can get into a little more detailed question.

I would like for each of you to tell me if you believe there is absolute proof without a doubt that methyl bromide is an ozone depleter. If you would, Ms. Nichols, start with you.

Ms. NICHOLS. Yes.

Mr. NORWOOD. You believe that.

Mr. Elworth.

Mr. ELWORTH. I am not a stratospheric scientist. I have no idea.

Mr. NORWOOD. Mr. Pomerance, how do you feel about that?

Mr. POMERANCE. I take my guidance from the scientific assessment of the ozone depletion problem, which in full evaluation of the ozone-depleting potential of methyl bromide, has concluded that methyl bromide is indeed a significant ozone depleter.

Mr. NORWOOD. And so the answer is yes, you believe it is.

Mr. POMERANCE. Scientists have told us it is a depleter. Has anyone witnessed the actual reaction in the atmosphere?

Mr. NORWOOD. Well, that is why I said "absolute." What that means is, have scientists actually said yes, it is a depleter?

Mr. POMERANCE. The answer is yes.

Mr. NORWOOD. All right, another quick answer, please; yes, no, or I don't know. Do you believe that absolute proof is available to us that there is a hole in the ozone layer?

Mr. POMERANCE. I will start. Yes.

Mr. NORWOOD. Thank you.

Mr. NORWOOD. Mr. Elworth?

Mr. ELWORTH. I am remembering my college's logic class on the issue of absolute proof. There is proof there is a hole in the ozone layer. To the extent that science can prove it, yes, sir.

Mr. NORWOOD. You need to run for something, I can tell you. Holy Moses.

Ms. Nichols, if you please.

Ms. NICHOLS. I am about to give a religious answer.

Yes.

Mr. NORWOOD. And therefore, that I am sure is based on the fact that the great majority of our scientific community would agree with you or you would not have said yes, I guess.

I want to follow up on Mr. Burr just a little bit, and I will try to be as quick as I can. But as I understand it, the Montreal Protocol had about 150 different nations that signed on in 1987. In 1992 we had the Copenhagen Amendments, which is, what, 4 years ago. And as we stand now, we find that two-thirds have not signed up. And you did say, Mr. Pomerance, that it took a long time to have people to agree to different amendments. Mr. Pomerance, how long is a long time?

Mr. POMERANCE. Well, let me suggest at the time of the Montreal Protocol, there were 23 governments that became immediate parties, that is all. Then it took some time, I suppose years, to reach the number that you mentioned. I think it would be useful to supply, if we could, the dates of ratification of various governments at the Montreal Protocol, London amendments and Copenhagen, because it does take time. That is the principal rational.

I would just add that at the Vienna meeting, all the decisions were taken by consensus, and I think that if any government had not intended to comply with them, they would have said so.

Mr. NORWOOD. I do not need those dates, but thank you anyway. I guess the question is, is there one standard for a hundred countries and another standard for 50 countries 4 years later?

Mr. POMERANCE. The countries that have ratified a particular agreement are subject to its constraints.

Mr. NORWOOD. So that means a hundred countries have a little leg up, if you just want to talk about competition.

Let me ask about this, and I think Mr. Elworth, this could go to you. It is my understanding that EPA has published a booklet on alternatives to methyl bromide. And in this booklet it has 10 different case studies. Is this book useful to U.S. farmers?

Mr. ELWORTH. Sir, I have not reviewed the book. I am sure it has been given wide circulation.

Mr. NORWOOD. I will be happy to have an answer from anybody else who can tell me about it, then.

Alternatives to methyl bromide. You spoke to it some, Ms. Nichols. Is this booklet useful to our farmers?

Ms. NICHOLS. This book which you referred to, and I think I have a copy of it somewhere around, was produced as the result of a very small program that we had at EPA last year. I believe we spent a quarter of a million dollars doing direct grants to growers or grower organizations in order to—I believe this is what you are referring to, the alternative to methyl bromide.

Yes, this book has been widely distributed; and we have been told by a number of people, and some of them are cited in the references, that they did find it useful. It doesn't solve all the problems, as I indicated in my testimony, but for these particular instances, yes——

Mr. NORWOOD. One of the treatments in this booklet is described as an alternative to methyl bromide as using hot water, requiring 50,000 gallons of hot water and 300 gallons of diesel fuel per acre. And I am curious to know how you feel about that from your experience in California. Would you view this level of water and fuel consumption as environmentally sound?

Ms. NICHOLS. Obviously that is a limitation of this alternative, in that it would not be successfully used in a place where water use is a major concern. I believe the demonstration program that was utilized there was done in Florida by an associate professor of nematology at the University of Florida. This was research that this academic institution had initiated, based on their belief that it would be useful to growers in Florida, which was why we supported it at EPA.

Mr. NORWOOD. And is it environmentally sound?

Ms. NICHOLS. Yes, if you have the water; and the use of diesel fuel obviously is an issue. But again, there are tradeoffs in all businesses in all forms of production, and the issue is net: Is there more or less harm from one than the other?

Mr. NORWOOD. I want to be very careful, Mr. Chairman, with this next question, because I have a company in my district called Cricket Crap, and they sell a lot of it. But in this book it mentions that perhaps the use of cricket litter would be an alternative to methyl bromide, and I, of course, encourage that because of my company called Cricket Crap. But I would like to know if you would consider this a viable option to methyl bromide.

Mr. BILIRAKIS. Quick answer.

Ms. NICHOLS. I don't even want to touch that one.

Mr. NORWOOD. Well, Mr. Chairman, next time around I will finish. Thanks so much.

Mr. BILIRAKIS. Let's see, Mrs. Lincoln.

Mrs. LINCOLN. Thank you, Mr. Chairman, and thank you for bringing up what we in Arkansas feel is a very vital issue to the economic component in the First District of Arkansas. We are the No. 1 rice-producing district in the Nation, and I was pleased to hear the comments from Mr. Elworth in regard to making sure that we do look toward providing an arena where our American farmers can be competitive in a world marketplace. Quite frankly, right now we are working under 1949 farm law because we have no farm bill, and most of our farmers are under extremely constricting circumstances in terms of what they can produce, how they can produce it, what they can expect, and this is yet another issue where I think that they have some concerns as to what they can expect.

My first question would be: Would the administration ever consider some kind of exemptions for certain uses of methyl bromide? Maybe, Ms. Nichols—I know that you previously testified that EPA would adopt a safety valve should alternatives fail to appear, and I think my colleague from Texas, Mr. Hall, brought up the issue that really alternatives are the issue here. If we are going to eliminate the use of methyl bromide, are there alternatives and would the administration consider certain exemptions?

Ms. NICHOLS. Yes, Mrs. Lincoln, as I indicated in my written testimony, in a little more detail, we believe that the success of the phaseout of the other ozone depleters has worked because it was a market-based program. That is, there was a total allocation of the amount of an individual compound, and then there was an ability to use it based on its economic value versus the alternatives. And everyone knew that at the end of the day there was going to be a phaseout, so there was an incentive for people to come up with the alternatives and make them economically attractive. What I am worried about—and so therefore we believe that we should do the same thing here——

Mrs. LINCOLN. I do not think anybody disagrees here——

Ms. NICHOLS. No, no, but let me just——

Mrs. LINCOLN. We just need to look for alternatives.

Ms. NICHOLS. Right.

Mrs. LINCOLN. My question to you is, would the administration entertain the idea of certain exemptions——

Ms. NICHOLS. I was just sort of doing the lead-up and I am sorry if it took too long.

The exemption concept is one that we believe is most useful when you come to the end of the process and you find that for a specific use you haven't met the target. If you signal at the outset of the process that there is an exemption going to be given to some whole category, you then take away the incentive to develop the alternative in the area.

Mrs. LINCOLN. Well that is fine and good, but the problem right now with my farmers is you got 7-, 8-year generation farm families who have no idea what to expect from this year, because no one has made any attempt to make preparations in the farm bill or anything else. Farming is not something that you can just do at the last minute. It is something you have to prepare for and you have to know what to expect.

So it will be very helpful to us to know whether or not the administration would even entertain the idea of some exemptions in those cases; and I guess really, too, could it be done administratively, or would it really require amending the underlying Clean Air Act to allow the safety valve that—or exemption-type situation that you might talk about.

Ms. NICHOLS. We would like to have the ability to grant exemptions, just to be clear in answer to your question. We believe we should be able to grant exemptions where there is an essential economic use for which there is no alternative. We think that there should be legislative authority to do that and——

Mrs. LINCOLN. So administratively, as opposed to having to amend the underlying statute.

Ms. NICHOLS. We would prefer to have criteria and, you know, clear parameters for the essential use exemptions in the statute. And I have set out some of the criteria that we thought should be there, but we would prefer not to have a list of exemptions in the statute because we think, as I said before, that that would probably be counterproductive, that would not be the right way to go.

Mrs. LINCOLN. But, in other words, if you did fall upon the situation where you could grant an exemption, it could be done administratively.

Ms. NICHOLS. And we would be prepared to do that, absolutely.

Mrs. LINCOLN. Well, just for the record, I think it is important to make my point that rice mill fumigation is a critically important use of methyl bromide, especially in the No. 1 rice producing district in the Nation, and that would certainly be a concern of ours. A key concern of ours would be the possibility of exempting the rice mill fumigation.

We have talked a little bit about alternatives, as I said, my colleague from Georgia as well as my colleague in Texas have brought up the issue of what alternatives are out there; and I think that that is a really important question from all of you as to what do you see as a serious alternative currently that exists right now, other than what is in that booklet.

Mr. Elworth, I would be glad to hear from you.

Mr. ELWORTH. Yes, Ma'am. I think what is important is how you decide whether something is or is not an alternative. And from USDA's point of view, from farmers' point of view, from the people that have to rely on an alternative to raise a crop or store it or mill it, it has to be effective, it has to be commercially available, which means it has to already be approved by EPA; it has to be economical in this sense, not just economical in terms of an on-farm budget; but it has got to make certain that the producers can remain competitive, both domestically and internationally; and it also has to fit into their overall operations.

There are some types of equipment that growers might have to implement that would be very expensive, and all of that has to be figured into whether an alternative is actually available and efficacious; and it also has to be acceptable, if it is for export, by the importing country or by acceptable—by your buyer, by your processor——

Mrs. LINCOLN. [continuing] inventory in many countries for exports coming in, is it not, and has USDA devoted some of their research dollars to this?

Mr. ELWORTH. Yes, Ma'am.

Mrs. LINCOLN. You have.

What has EPA done to help in that look toward alternatives?

Ms. NICHOLS. We have had a very small program, as indicated by that little green book, to work directly with some of the users of methyl bromide to try to see whether they could demonstrate feasibility, because we felt that that was where there was a need to supplement the work that USDA was doing.

Mrs. LINCOLN. So, four groups have been involved in this along with——

Ms. NICHOLS. [continuing] structural users.

Mrs. LINCOLN. Has that been the case with USDA as well?

Mr. ELWORTH. Yes, it is really important that we not only figure out what is a promising research project, but make sure this is a pressing need that can actually be used on the farm. And you have to talk to the farm groups to be able to do that.

Mrs. LINCOLN. Have either of your groups contacted DOE and some of the DOE labs?

Mr. BILIRAKIS. Yes or no answer, because we are running out of time.

Mrs. LINCOLN. [continuing] for the technology transfer. I have worked with the DOE labs in many of my ag areas for research that has been very profitable and very forthcoming. You have worked with DOE at EPA.

Ms. NICHOLS. I am not aware on this program that we have, but I will check into that.

[The information follows:]

To date, EPA has not worked directly with DOE on methyl bromide substitutes. Indirectly, however, both EPA and DOE have provided grants to the University of California at Davis (UCD) for methyl bromide substitute work. EPA's grants have been directed toward the use of microwaves and electricity as substitutes. If favorable, EPA will integrate the UCD/DOE findings into its alternatives outreach program.

Mrs. LINCOLN. I would like to ask the chairman for unanimous consent to have my statement——

Mr. BILIRAKIS. I made that suggestion at the beginning, before you got here.

Mrs. LINCOLN. Thank you, Mr. Chairman.

Mr. BILIRAKIS. By all means, without objection.

Mr. Bilbray.

Mr. BILBRAY. Yes. Mr. Pomerance, I was quite interested in your statement about the procedures of developing countries' government approval being, let us just say, slower than the developed countries' development procedure. I say this as somebody who has spent 20 years working on environmental issues with a developing country.

Are you trying to tell me that you honestly believe that the government procedures for developed countries are more streamlined and faster than the procedures in developing countries?

Mr. POMERANCE. I wouldn't want to make a generalization about which governments move, in general, faster on a particular international agreement, because it varies. So that I do not think there is a general statement that can be made. I think the fact that the Montreal Protocol has now got 150 parties and it requires phaseout, or has the initial commitments to controlling CFCs, and the fact that I think what happened in Copenhagen was that the controls mainly that were adopted there, applied to developed countries, has slowed the ratification by developing countries. Now that the Vienna Agreement is in place, I would expect a pickup in developing country participation to the Copenhagen Amendments.

Mr. BILBRAY. Well, I was just saying that I was very concerned that somehow the procedure was being used as an excuse. I have seen again and again, especially in developing countries when they feel it is to their benefit, their processes can be very streamlined and very fast, which is not necessarily true in developed countries.

Mr. POMERANCE. I think it works in both cases.

Mr. BILBRAY. Well, I am just seeing the fact that they can be very slow, too, and then always using the excuse that they are a developed country.

My question is that when we get into the situation, is the State Department's commitment to making sure that this is a worldwide strategy rather than just an American strategy or a developed country strategy—are you willing to go to the total line on this thing? And I guess the issue comes down to—Mexico is a good example.

It is that you have got an agreement that says there is one standard for American farmers, but then there will be another standard that basically leaves a huge window open, based on future use, based on a certain trigger. It says that on one side of the border there will be one standard that we will expect that EPA will be expected to enforce and USDA will have to accommodate; but then on the other side, we will have basically an open door.

Do you think that is fair and do you—are we really committed to enforcing any agreement that we can work out with these people?

Mr. POMERANCE. Well, certainly our goal in going into this was to—initial goal was to recall for universal phaseout of methyl bromide. Now, because there was a little support in the rest of the world for that, we negotiated an agreement which took us from the position of having in the Clean Air Act the unilateral phaseout in the United States to a situation in which the rest of the developed world has the same—has a phaseout in 2010. All parties have the same deal, the same agreement; and, with regard to developing countries that in toto, in toto, use half, less than half today what the United States uses, have agreed to a freeze. We would expect that the next steps would be taken over the next few years, because with regard to all the other chemicals that are regulated, there is a delayed or, nevertheless, phaseout for developing countries.

So we got a cap on developing country use, uniform agreement in the developed world, when we only had a unilateral provision ourselves.

Now, we also have done two things: We have said the Clean Air Act needs to be changed a bit to accommodate the situation, and with regard to the phaseout which applies to developed countries only, the 2010, there should be a critical agricultural-use exemption, and that was agreed by the parties. So you added some flexibility there.

So we took, I think, at least four or five steps to deal with the situation. It was our goal to do that, and I think we were reasonably successful. Thank you.

Mr. BILBRAY. USDA—you know you have got to regulate this in many patterns. Do you think it is fair that a farmer in the Imperial Valley in California, or the Rio Grande in Texas, will be basically outlawed from using a product when their competitors right on the other side of the river basically are going to be able to continue this, the use, into the future?

Mr. ELWORTH. USDA, yes. I think there is enormous concern and there has been for a long time, under a lot of different situations, for a lot of crops and a lot of States, about the concern of competition from foreign producers. If you take the current situation where Mexico would have use of methyl bromide and domestic producers currently do not have sufficient alternatives, I think it does raise significant competitiveness concerns. The question is, in the future will we have additional alternatives? The answer is yes. Will we have them quickly enough to protect us against all competitive disadvantages? There is an enormous amount of concern, both with USDA and among producers, that I believe it is a legitimate concern.

Mr. BILBRAY. Well, see, my concern is I see, again and again, that the State Department will basically always allow the copout of the developing country, especially in relationships with places like Mexico. It is said that they can't afford to, so we can't hold them to the same standard.

But at the same time we are doing that, we are throwing open the doors—and I am not saying I am against international commerce, I am very supportive of it, but to have that commerce, the environmental responsibility has to be borne if you want the economic opportunities, and that has not always been the policy of the United States in the past. They have allowed the copout. I don't think either Americans or Mexicans are well served by this, and the environment damn well isn't served with that attitude. I think there is a real problem here; is our credibility able to be evenhanded in our enforcement in environmental regulations and not have a standard that Americans must bear a disproportionate burden here?

The argument of saying, well, today this is the standard, I think we all know the dynamics that are occurring across the border, and we darn well ought to be shooting for those future standards, not accepting some substandard based on questionable numbers.

I yield back the remainder of my time.

Mr. BURR. Would the chairman yield for 10 seconds?

Mr. BILIRAKIS. For 10 seconds.

Mr. BURR. Thank you, Mr. Chairman.

Mr. Pomerance, I just want to give you an opportunity to clarify one thing. I understood you to just say that we must change the Clean Air Act. Was that what you intended to say?

Mr. POMERANCE. I think in our testimony we indicate there were like—I think EPA and the Department of Agriculture's testimony, they indicate the administration's position. We support a change.

Mr. BURR. Thank you.

Mr. BILBRAY. Thank you, Mr. Chairman.

Mr. BILIRAKIS. Mr. Coburn.

Mr. COBURN. Thank you, Mr. Chairman. First of all, I want to apologize in advance to all three of you. I am fairly frustrated with the situation that we are discussing today, and when I direct my questions to you there will be nothing personally intended. I just want you to know that I have a rather negative attitude about what we are talking about today, and I don't want you to take it personally.

I also have a negative attitude with the respect that this committee has promised us time and time again, not this subcommittee but the general committee, that we would have some curriculum [illegible] on people that are testifying before us, and they are not here again today, so I had no knowledge of your background. So I am at a disadvantage in knowing what your scientific training is and what your knowledge is—your background and education—before I ask the questions.

I think it is interesting that the two people who are trained scientifically on this committee have extremely large questions about much of the scientific validity that is underlying a lot of what we are talking about today, and that is part of where our frustration comes from. Ms. Nichols, I would just ask you—I want to quote exactly what you said a minute ago, and this lends to some of my frustration.

"If everyone in China bought a refrigerator with CFCs, it would wipe out our ability to do anything about the ozone layer." You said that a moment ago. What is the scientific basis, the actual scientific basis for you saying that if everyone in China who would buy a refrigerator, that it would wipe out our ability to do anything about the ozone layer?

Ms. NICHOLS. Would you like me to tell you who I am first, and then tell you the answer to your question? All right, I will do that.

My name is Mary Nichols. I am an attorney. I have spent approximately 25 years now in the field of environmental protection, both in nonprofit public interest organizations, running the environmental programs in the State of California in the mid–1970's to the early 1980's, teaching on the subject of environmental law and environmental policy. I do not have a degree in science of any sort, but I have made my life's work the field of evaluating science in order to determine its relevance for public policy. My statement was a loose statement and obviously I didn't attach any numbers to it, but I appreciate the opportunity to explain it further.

What I meant to say was that if you look at the total volume of CFCs and their role as ozone depleters, and the desire of the world—which I take as a given, as expressed in the international treaties, that we would try to take action as a world to limit the harm that we have done to the ozone and to try to help it to heal—that an increase in CFC production and use in China sufficient to serve the growing market there would undercut and in effect render useless very serious efforts that could be made in the United States to do the same thing; because the ozone, as I understand it, does not care where those CFCs come from. That is the basis for my comment.

Mr. COBURN. Exactly my point, is the carelessness with which we throw around rhetoric on environmental statistics and fact. What you just said is very much different from what you said a moment ago. And what my point is, is that what I think we need to be very careful with as we take our children's future in hand, of trying to create a safe environment, is to make sure that we do that wisely and under the guise of what is thought to be agreed-to science.

I find that the two statements that you made are very, very different. And my whole point—and again this is not personal, please don't take it that way—is that my observation is that we are way too lazy—we are, and the people that deal in this area—about the general statements that we are saying about—because if you were to take all the people in China, and the refrigerator for them, and the total amount of chlorinated hydrocarbons or chlorinated fluorocarbons, and can compare those to other emissions of chlorine-based compounds in the country, it would still be a small percentage of what totally goes into the atmosphere, and I think that is scientifically documented.

Well, there is some dispute about whether it is scientifically documented. Let me put it that way: My point being I want to work to solve this problem with you, and I want to participate in that, and I want us to make wise decisions that look at all the science, and then wise statements, after we look at all the statements, that we don't get the emotional side into it and inflame it and it takes us away from our goals. Because whether I agree with everything that we are doing, I want a clean environment, I want a safe environment, I want my grandchildren to not have problems, and so I am willing to do those things. But I think at the same time, we have to have more of an agreement that we are going to look at the facts, and talk from the facts rather than inflame statements.

And you know, I would just continue with one question I am real worried about what to tell the farmers in my district. I mean, what would you tell me to tell the farmers in my district right now who are worried about that they are not going to have methyl bromide in the future? What should I tell them right now? Don't worry about it, there is going to be a substitute there that is economically feasible? I mean, can I go home and tell them that?

Mr. Elworth?

Mr. ELWORTH. I think what USDA is suggesting to farmers is, first of all, we know that their ability to manage is absolutely critical, that in many cases if you don't manage the pests you don't have a crop. Second, that we have spent and hope to be able to spend a significant amount of time and money on research, not just in identifying alternatives, but getting them approved and getting them out to the field to be tested. And third, what this administration is saying is that we think that there is a problem with competitiveness with agriculture as part of the principles that both of us laid out, and that we think competitiveness is an important issue, protecting the global environment is an important issue, and keeping the incentives for research are important, and we are willing to work with you folks in Congress and with other people to figure out a solution that meets the concerns of your farmers.

Mr. COBURN. So, to follow up, can I go home and tell them either methyl bromide is going to be available or something—competitive substitute is going to be available? I mean, can I tell them that?

Mr. ELWORTH. You can tell them that. You can tell them that in our view the competitiveness for agricultural production and trade is an important issue of this administration.

Mr. COBURN. Well, they will compete I think, but they want a substitute. They are asking the question; what is the answer? And the answer is, we are going to be flexible enough. If there is not a good substitute, we are going to let them keep using it. Is that correct?

Mr. ELWORTH. Consistent with the principles we laid out, yes, sir.

Mr. COBURN. Is that from the EPA, is that their position as well?

Ms. NICHOLS. Yes, but I would just like to add one thing because I think it is important. We talked a lot about the research the government is doing in this area on alternatives. The bulk of research that is done on pesticides in this country is done by the private sector, not by the government, and the fact that there is a deadline in the law is what is driving a lot of that research; and we certainly don't want to do anything to discourage the farmers from continuing working with the chemical manufacturers and so forth to devise good alternatives.

Mr. COBURN. So you don't want to take the pressure off of that——

Ms. NICHOLS. We think it is essential, but we also think that they should know that if at the end of the day the alternatives are not there, that this administration is supporting an ability to have a continued use.

Mr. COBURN. Right. All right, thank you.

Mr. BILIRAKIS. I thank the gentleman.

My—and I think that this point has been made by probably virtually everybody on this panel up here—my concern is that the citizens of America are represented at this bargaining table. In my opening statement I emphasized that substantial changes in Treaty commitments take place at these meetings—you know that, sir, very well, not only under formal amendments that are subject to ratification by the Senate, but these less formal adjustments take place which are not required apparently to be ratified by the Senate. So you don't have the citizens, the farmers, if you will, of America at the table, particularly when it comes to these less formal adjustments, and that concerns me. And, again, talking about the farmers, my biggest concern is that the Department of Agriculture people be at that table so that you be consulted and you have a very strong voice in terms of influence insofar as these meetings are concerned.

And, Mr. Elworth, your testimony states that USDA has actively participated in development of our positions for international deliberations by the parties of the Montreal Protocol. And yet I am informed that USDA only learned of the specific content of the U.S. draft decision on a critical agriculture use exemption for methyl bromide over the telephone from Geneva, "immediately before the draft decision was introduced." So I don't know if that is all true. You apparently were not at the table when it came to that particular draft decision. That is a very important draft decision, I might add, I am sure you would agree, representing the citizen farmers of this country, that you are at the table adequately.

Mr. ELWORTH. The content of that draft decision had been discussed extensively within an interagency group, and the draft decision that was presented there was entirely consistent with the discussions we have had.

Mr. BILIRAKIS. Well, was the specific wording discussed with you prior to that telephone conversation?

Mr. ELWORTH. Yes, sir. The issue in terms of immediately prior to—we did not know exactly when this would be introduced, and we had not been informed of actually when in the proceedings, the opening of the working group, that this would be introduced. So I was called over the phone, I saw a copy of it, and the copy that I saw was consistent with the discussions we had had previously.

Mr. **BILIRAKIS**. So you feel then that USDA had adequate time to reflect on this and, in terms of its input, that there is no need for an extension or delay, to delay introduction of the specific proposals.

Mr. **ELWORTH**. No, sir.

Mr. **POMERANCE**. Mr. Chairman, might I add a word about the process?

When the administration developed its position on this issue, it was an interagency process where all agencies that wanted to be at the table, at the table; and when we went through the international negotiations, the Department of Agriculture was a part of our delegation, and the consultations were thorough and went on constantly through the process from meeting to meeting. So it was a fully integrated consultation and development of position.

Mr. **BILIRAKIS**. All right.

Now, was this considered an amendment so that it required ratification by the Senate or was it an adjustment?

Mr. **POMERANCE**. No, it was an adjustment.

Mr. **BILIRAKIS**. It was an adjustment.

Mr. **ELWORTH**. And let me add, Mr. Chairman, if I might; part of the reason that all of this was cleared over the phone was—I was not present and I don't even know where I was, Nairobi or someplace like that, I guess—Geneva, I guess. So anything that had to be cleared for final approval had to be cleared by me over the telephone.

Mr. **BILIRAKIS**. Has there been any changes made to the terminology, to the wording since it was first introduced?

Mr. **ELWORTH**. When it was first introduced, we wanted to make sure that the basic framework was there. The final decision, as introduced in Vienna, was somewhat worded somewhat differently, but it was essentially the same content.

Mr. **BILIRAKIS**. You know, questions of enforcement come to mind, and others have mentioned this. The Montreal Protocol, what sort of enforcement procedures exist—in terms of individual items—let's go back into the refrigerators in China, which seems to have taken over this meeting.

Mr. **POMERANCE**. Fortunately, we haven't had to utilize very formal mechanisms up to this point. One, the problem that we dealt with at the meeting in Vienna is the—is Russia which, after this, the first of this year, will not be in compliance; and the process that will go forward is that there is a committee of the parties that will continue to review the situation to work on plans submitted by the Russian government to come into compliance.

At the same time, there is an effort underway at the World Bank and the Global Environmental Facility to assist the Russians in coming into compliance. So that is the major of mechanisms that is used: an oversight committee of the parties to watch over a compliance process by government. And basically the hope is that, generally, international agreements of this sort work on a voluntary basis so that 95 percent of, or close to 100 percent of compliance is really—the enforcement mechanism is a political one, but in this case we have to have processes to oversee how the Russians will come back into compliance, and we are developing international processes to assist them.

Mr. **Bilirakis**. Well I think I speak for every member of this committee that we—I don't feel it is an intent to eliminate title VI of the Clean Air Act—but we are talking about needed changes, and I think you all have indicated that that is something you can support—and after all, the Treaty and Protocol is a dynamic type of a thing, isn't it?

But you know, I am greatly concerned, as are others, that we have our Clean Air Act, and we have implementing provisions and we have the proper penalties and the punishments and sanctions to enforce the act and other countries don't. Even though we are a world leader, and we should be a world leader, we have got to be an example to the rest of the countries, my concern is for reciprocity. We have got people out there, like farmers, who may get hurt by virtue of the things that we do up here.

And so just a general statement, Ms. Nichols, and the others. I hope that we can be reasonable with open minds to sit down to try to make the needed changes, not changes for the sake of change, but the needed changes so that our farmers and our people can be on a equal competitive footing with the rest of the world. I hope we can work together rather than just snip at each other in doing what needs to be done, again not for the sake of change but for the sake of the good of our people.

Mrs. Lincoln.

Mrs. **Lincoln**. Thank you, Mr. Chairman. I just have a couple of quick follow-up questions.

I am not a scientist, I am married to one, however; and in lieu of what Dr. Coburn was mentioning in talking about different types of ways to work out and solve problems and the problems that are involved, we still do in this Nation produce the most safe and abundant and affordable food supply in the world. And I think that at whatever point we put our Nation's farmers and agricultural production at a disadvantage in being able to do that, then we also put in jeopardy our children, our future, and all the terms of what we can be able to provide them.

I certainly know that rice at $20 or $30 a bag puts an undue burden on indigent children and a host of others, just as we may see some problems and complications with methyl bromide, and I think that we certainly can work to solve the problems that we have.

My understanding, and I am sorry to have been late, and it may have already been addressed, but the policy from the parties to the Montreal Protocol relates strictly to the elimination of man-made methyl bromide, is that correct? Well, methyl bromide comes from an extensive array of sources, some we have talked about—farming, cars and the ocean.

Is there any indication or studies that give us the total methyl bromide released percentage breakdown between the various sources?

Mr. **Pomerance**. I think that the breakdown between the sources has been listed as—you know, best estimates that we have.

Mrs. **Lincoln**. Do you have those?

Mr. **Pomerance**. I think I do. We will submit them to you.

[The information follows:]

According to the "Scientific Assessment of Ozone Depletion: 1994", a report prepared by approximately 300 of the world's leading atmospheric scientists, there are four principal sources of methyl bromide in the atmosphere. Three of these sources—to wit., agriculture, biomass burning and automobile exhausts from vehicles using leaded gas—are anthropogenic or man-made. Oceans are the fourth major source of atmospheric methyl bromide. According to this report, some 40 percent of the methyl bromide in the atmosphere can be attributed to the anthropogenic sources.

Mrs. LINCOLN. I would be happy. I have heard rumor, and I have heard from several different groups that there is a great deal that comes from a lot of different areas, some much greater than others, and I would——

Mr. POMERANCE. One of the, I think, the best processes that goes on internationally is the scientific assessment run by the world's best scientists on this subject that look at the ozone-depleting potential of each one of these chemicals and their sources and sinks, and they have done that for methyl bromide, and we would be happy to get that to you.

Mrs. LINCOLN. I will be happy to have the facts on that, because I think it is important, if we are looking at methyl bromide coming from various sources, to know the percentages of that.

[The information follows:]

With respect to specific numbers, the scientists estimate that 60 to 160 kilotonnes a year of methyl bromide enter the atmosphere from the oceans; 20 to 60 kilotonnes from agricultural uses; 10 to 50 tonnes from biomass burning; and 0.5 to 22 kilotonnes from automobile exhausts. In addition to these four significant sources, there are also two minor sources. Structural fumigation and industrial emissions constitute four and two kilotonnes per year, respectively.

Mrs. LINCOLN. I know that we talked about research and alternatives, and I would encourage both the EPA as well as USDA to work extensively with the DOE labs. They have been very productive, I think, in helping us find so very common-sense, environmentally safe solutions for some of our other farm problems. I have been working an awful lot with them in terms of aquaculture, and there is a great deal of taxpayers dollars already invested in those labs and they have got some great scientists on hand that can help us come up with some of those solutions.

In talking about the research that has been done, and I do understand that USDA has invested some of their dollars into that research, can you give me an idea of what type of percentage breakdown that comes in terms of post-harvest application, preplanning alternatives and other areas?

Mr. ELWORTH. I can get that information to you. I don't have the numbers right with me. The total appropriation this year is $13.9 million through ARS. Some of that money is actually spent through cooperating universities. And I would just point out on your point with the DOE labs, we signed a memorandum of understanding recently with DOE specifically to utilize some of their facilities in biocontrol activities and mass rearing.

Mrs. LINCOLN. Well, my comment to my colleague or to you all is, we see severe cuts in agriculture, and we have continued since 1952 to see agriculture cut more than any other industry in the Nation. The problem becomes that if we continue to cut the research dollars that are associated with that, not just the programs, that we are going to continue to see less innovative alternatives, more environmentally sound alternatives than we have seen a great deal in the past. So it is very important that we provide you all with the resources to be able to what we are asking you to do.

Mr. ELWORTH. As you know, we feel the same way.

Mrs. LINCOLN. Thank you very much, Mr. Chairman.

Mr. BILIRAKIS. Mr. Burr.

Mr. BURR. Thank you, Mr. Chairman.

Mr. Pomerance, let me go back to something Mrs. Lincoln just mentioned. You have highlighted the scientific studies that have gone into methyl bromide, and we are certainly not here to debate whether it participates or not. There are some differences of opinion in the scientific community, but for the most part methyl bromide is said to be a contributor. But would you not agree that the scientific studies on methyl bromide's percentage of contribution to ozone depletion, as it relates to that methyl bromide which is naturally produced, has not been taken into account in these scientific studies?

Mr. POMERANCE. I think that the scientific studies look best—I understand them—evaluate different emissions, production, consumption, trajectories of methyl bromide and their potential effects on the concentration of ozone-depleting gases, and when they do that, they take into account the natural background levels of methyl bromide.

Mr. BURR. But in fact, have you ever seen a study that suggested whether the natural production of methyl bromide was a constant annual percentage or whether it had some variance between those percentages? In other words, some years it went up, some years it went down. Have you ever seen anything scientific that suggested that we understand the natural production yet?

Mr. POMERANCE. Well, I think we have—what I have read of the summary scientific assessments on the issue—what the conclusions are about methyl bromide, and I—they do take into account the variability in natural background levels. It may vary, depending on natural processes year to year, but in general in these things there is a background level where the sources of methyl bromide is equal to the sink, and what human beings are doing is adding a source factor that then allows concentrations to rise.

Mr. BURR. I would suggest to you that some of the scientific information that we have looked at in past hearings in this—I can't remember whether it was this subcommittee or the oversight investigation—in fact, the scientists that testified could not be specific about——

Mr. POMERANCE. Well, I think what is happening on ozone in this area is that every 5 years the best scientists—and they are listed in the documents, dozens or hundreds—get together, do an assessment based on all the best peer-reviewed literature. That includes atmosphere measurement——

Mr. BURR. Their concentration, sir, is on methyl bromide's contribution to the depletion of ozone——

Mr. POMERANCE. And methyl bromide itself.

Mr. BURR. My suggestion is, can we conclude from their testimony so far that in fact we don't have the scientific capabilities yet to determine what the natural production of methyl bromide is, was, and will be in the future?

Mr. POMERANCE. I think we know what the best estimates are of those—what you just enumerated—and I think they have done that. I would be happy—we will develop an answer, a more detailed answer for you. I am not a methyl bromide investigator.

[The information follows:]

As noted above, the 1994 Scientific Assessment concludes that 60 to 160 kilotonnes of methyl bromide in the atmosphere is attributable to the world's oceans. The report notes that "it is also important to stress that there is a very large uncertainty in the magnitude of the gross oceanic source, which is a necessary consequence of the disagreements among measurements of the air-sea disequillibrium and the uncertainties in the air-sea exchange rate and the oceanic chemical destruction rate. These are active research topics . . ." [The Report is retained in subcommittee files.]

Mr. BURR. We will both go back—testimony——

Mr. ELWORTH. We are both interested in it, I think.

Mr. BURR. I can assure you that we are.

Mr. Elworth, would the Ag Department prefer to see us follow the Montreal Protocol?

Mr. ELWORTH. I think that, as we have indicated, to the extent that following the Protocol or any other legislative solution met the principles we laid out, we would be glad to consider.

Mr. BURR. If the Department of Agriculture were given a choice between what is currently in the Clean Air Act and the Montreal Protocol, what would be your preference?

Mr. ELWORTH. Well, we are obligated under the Treaty, because being signatories to the Treaty to the developed country controls, Congress could decide that we would abrogate those.

Mr. BURR. If the EPA suggests changes to the Clean Air Act as it relates to methyl bromide, would the Department of Agriculture support that?

Mr. ELWORTH. Could you repeat that. I am——

Mr. BURR. If the EPA suggests changes to the Clean Air Act as it relates to methyl bromide, would the Agriculture Department support that change? In other words——

Mr. ELWORTH. The nature of the change matters a great deal here.

Mr. BURR. Extending the ability to use methyl bromide. I am sorry, I let you assume that.

Mr. ELWORTH. I think it is important, as I laid out, that we continue the incentives to research. And one might assume that environmental, Environmental Protection Agency proposed a change, it would continue to protect the global environment and we would still meet our Treaty obligations.

Mr. BURR. If there were no change, is it the Department of Agriculture's position that American farmers would not be on a level playing field in an international market for their products?

Mr. ELWORTH. You are talking about in the year 2001?

Mr. BURR. Correct.

Mr. ELWORTH. There would be a significant disparity between the controls under which American producers operated—growers in this case, not manufacturers—between the controls facing American growers as opposed to growers in all the rest of the world. And we can go through the details, the differences between the Clean Air Act and the Montreal Protocol.

To answer your question more directly, if I may, we think that based on our understanding of the availability of adequate alternatives at this point, if we were to project into the future, we think it is unlikely that there would be adequate alternatives by 2001. So to answer your question, finally yes, we think it is likely to be a significant competitive disadvantage for agriculture.

Mr. BILIRAKIS. Well, if the gentleman would yield; we certainly can't wait, though, until the year 2001 to make changes, is that not true? I mean, put ourselves in the shoes of the farmers and the risk they face and the capital that they will have expended and everything of that nature—we can't say to those people, hey, let's wait until the year 2001 and if we don't have an adequate substitute by then, possibly we can address it at that point in time.

Mr. ELWORTH. Well, we have indicated an interest in working with you now to develop an adequate solution. I think a number of people have mentioned in here and in the previous testimony that it is important to have that incentive for research, and there is some concern about just turning the switch completely off and sending the signal to people that they don't need to continue work on alternatives. As I mentioned in my testimony, we think there are lots of reasons to continue work on alternatives, above and beyond the concern for the clean air effects.

Mr. BILIRAKIS. If we were to make changes to the Clean Air Act, that would conflict with the Montreal Protocol. What would be the effect? How would this be handled? What would be the scenario in terms of the Montreal Protocol?

Mr. ELWORTH. I guess I would defer to Rafe on this. I don't do the international environmental agreements. If it conflicts with our obligations under the Treaty as developed countries, I think that— I guess it would kick back to you.

Mr. POMERANCE. I don't think I can answer as to what all the consequences would be. But in the extreme case of—I think I mentioned one of the amendments has been introduced to repeal Title VI. We would be unable to meet our obligation under the Treaty. We would be out of compliance.

Mr. BILIRAKIS. All right. But if you change the 2001 to 2010 or some year between or whatever the case may be, that still would be in conflict with the Protocol?

Mr. POMERANCE. I think you become out of compliance, a government, and I say this tentatively. The compliance in the same sense with the Russian Government became out of—they could anticipate that they would be out of compliance but didn't become out of compliance until the deadline had passed. That is to say, they knew before they couldn't meet the CFC phaseout schedule, but it wasn't until the schedule came into force that they became a government out of compliance.

Ms. NICHOLS. I was just going to say, with respect to methyl bromide, I wasn't aware that you were discussing any possibility of going beyond the Montreal Protocol. I was under the impression that you weren't suggesting that we eliminate any phaseout of methyl bromide. That would put us in contravention of the Treaty.

But if we stayed within the bounds of what the Treaty now calls for, which is the 2010 phaseout for developed countries, that would not violate our international obligations. It might have other consequences.

Mr. BILIRAKIS. So what you are saying is, as long as any changes made to the Clean Air Act are consistent with the Protocol there will be——

Ms. NICHOLS. Yes, and that is one of our principles, is that we want to stay consistent.

Mr. BILIRAKIS. Okay. I will yield back to the gentleman for another minute or so.

Mr. BURR. I thank the gentleman.

Ms. Nichols, in your testimony didn't you, in fact, also say that the EPA supports legislative change to the Clean Air Act as it relates specifically to parts of it dealing with methyl bromide?

Ms. NICHOLS. With all those various caveats, yes.

Mr. BURR. Okay. And I would take for granted that that is, following the Chairman's question, for the period 2001 up until the year 2010?

Ms. NICHOLS. Yes. We said we needed to stay within the bounds of the Protocol.

Mr. BURR. And if for some reason we ran into a situation where we still had a problem with the inability of a substitute, of producing a substitute, would the EPA suggest exceptions past 2002?

Ms. NICHOLS. The Treaty itself actually deals with critical agricultural uses after 2010. So the process that Mr. Pomerance described earlier that worked for the inhalants and worked for the sealants and so forth would be available for critical agricultural uses under the Treaty.

Mr. BURR. Okay. You also said, and I quote: We support the creation of an appropriate legislative remedy to ensure the availability of methyl bromide for those uses after the 2001 phaseout.

Now, you are—the administration is under assault today from the environmental community. Friends of the Earth have put out a statement. I quote: The Clinton administration is proposing the creation of an exemption that will allow large users of methyl bromide to continue using this dangerous chemical after the 2001 ban goes into effect.

Ozone Action says, and I quote: Senior Clinton officials—I think that may be somewhere on that table. Senior Clinton official is proposing to gut the Clean Air Act's protection of the earth's protective ozone layer.

And I can assure you that I am used to having those similar things said. I don't think that that is what we are here talking about today. But given that we have the capabilities to identify where American farmers might be adversely affected, is it not prudent policy in this country to try to work both the agricultural needs into this 9 years of flexibility that we have to still meet the Protocol?

Ms. NICHOLS. Yes, Mr. Burr, I thank you for reminding me that, as an environmentalist, we are always subject to debate about tactics. I don't think there is a disagreement on any side that we need to phaseout methyl bromide.

I have heard some questions being raised about whether our science is really good enough or not, but I am going to put those to the side for the moment and stipulate that we are going to abide by the consensus of the international scientific community that we do need to phaseout man-made—uses of methyl bromide and say that, given that, we need to find a way to do it that is as effective and as painless for our country as possible.

We believe that the experience that we have had with other ozone depleters has given us confidence that this country, given a cap, a lid, a goal, some research assistance, some technical assistance and the existence of a limited essential-use exemption where needed, can meet the goal; and that is what we want to try to develop with methyl bromide as well.

Mr. BURR. Well, for the record, this member supports what we are doing and actively wants to work with you to develop those exemptions; and, Mr. Chairman, with your patience, let me go on to just one other area.

As a consequence of our earlier discussions on the Protocol decision, we are again participating in a process of consultation both within the administration and with a wide range of affected groups to develop an effective legislative remedy.

Ms. NICHOLS. Yes.

Mr. BURR. Has the EPA consulted with Congress about the legislative remedy, in your opinion?

Ms. NICHOLS. I believe that my staff have had conversations with a number of staff from both sides.

Mr. BURR. Are you speaking of committee staff?

Ms. NICHOLS. Yes.

Mr. BURR. Let me just say today that——

Ms. NICHOLS. I don't know the details of what they are.

Mr. BURR. Let me just say today that it is the opinion of the committee staff on the Majority side that we have not been in consultation, and that is what certainly preempted or suggested legislation. And I know that H.R. 2230—you have been very specific about the EPA would not be supportive of that legislation.

Ms. NICHOLS. That is correct.

Mr. BURR. And my question would be, for what reason? Where do we fall outside in that legislation of the Montreal Protocol?

Ms. NICHOLS. You are referring to what I call the Miller bill, and I believe that there are a couple of reasons why we have objected to that, in addition to the fact that, as a jurisdictional matter, we think it effectively transfers the program for dealing with methyl bromide to the U.S. Department of Agriculture.

We are very happy to work collaboratively with our colleagues at USDA; but we think, with respect to pesticide registrations, that the FIFRA program works well. But we also are very concerned because the Miller bill, the way it works, it is a use-by-use type of exemption, case by case, every application by every application, which we think falls afoul of one of the criteria that both Mr. Elworth and I articulated, which is administrative viability.

We do not want to set up a massive bureaucracy. I know you don't want us to do that either, to be granting exemptions, you know, on a farm-by-farm or crop-by-crop type of basis. We think a market-based approach can be crafted legislatively, and that is not what the Miller bill does.

We are also concerned that it does put us afoul of the Montreal Protocol in the sense that it puts us in lockstep with all the other countries. And I think that we have had the ability in the past, as the United States, where we could move ahead of other countries and it was to our economic advantage to do so, to actually move faster on phasing out some of the ozone depleters ahead of what we would have been required to do, and this worked to our advantage.

Mr. BURR. Is there not a question as to whether it is in our economic advantage to move sooner than the 2010, based upon the information we have right now?

Ms. NICHOLS. I would not presume that for any individual crop or any individual use that we know the answer to that question yet.

I was in California—in fact, I arrived back very late last night—but I was out in California, which is my home State and where there is a massive controversy going on right now, as you probably know, about a legislative phaseout that they have, which was supposed to take effect this year. Didn't have anything do with ozone, it had to do with concerns about worker and community safety.

But there are quotes from a number of different types of agricultural industries in the L.A. Times that I was reading on the airplane that said, you know, with respect to wine grapes, for example, we don't want it; we can live without methyl bromide. Now if our wine growers can live without methyl bromide and growers in some other countries are using it, we have got a better way to go, it might turn out to be advantageous to us to move faster on phasing it out. It depends on the nature and the comments of the industry.

Mr. BILIRAKIS. If the gentleman would yield, we are talking about we have entered into a multilateral Treaty, which is pretty darn tough on the United States, as it is, and its farmers particularly, and yet we say we should not walk in lockstep with other countries, we should be tougher on our own people?

Ms. NICHOLS. I am saying we shouldn't give up the possibility that it would turn out to be economically advantageous, for example, to people who sell alternative technologies, that we might wish to move faster, in addition to whatever benefits there are in terms of the leadership position that the United States has on other environmental matters in the world where we have used our leadership in some areas as a tool to convince other countries to do things for us.

Mr. BILIRAKIS. I think I have probably agreed with most of what you said here today until you mentioned this business of not walking in lockstep and being tougher on our own people than we expect others to be around the world. Just a personal opinion. We are going to have to finish up this hearing, so please——

Mr. BURR. One last question, if I could, Mr. Chairman.

Let me just say the title of that article that you just read from is "Some firms turn away from methyl bromide." Just for the record, it didn't say all. The EPA does have a stated exemption or the intent to exempt for the production and export of methyl bromide. Am I correct?

Ms. NICHOLS. Excuse me, I am consulting with my colleague who is an expert on this topic.

Mr. BURR. Go right ahead.

Ms. NICHOLS. Okay. I was just checking. There isn't any ban under the Treaty on the U.S. company manufacturing methyl bromide here to export to another country, if it is allowed under the Treaty.

Mr. BURR. Let me just ask, is that not counter to what we are trying to accomplish here? I mean, is the purpose of that an economic decision, that we don't want to adversely affect those companies in the United States that produce methyl bromide?

Ms. NICHOLS. I am sure that was part of the discussion that went into formulating that position.

Mr. BURR. So the economic outlook for our country is a consideration in treaties of this sort, how if we consider it for manufacturers we should consider it for farmers. Is that a logical tie-in for me to take?

Ms. NICHOLS. I think it is. I think I can assure you that in the discussions that led up to the last meeting there was a great deal of consultation on the issue of what was in the interests of the United States as a whole, recognizing that what we are talking about here is a costly but we believe cost-effective program designed to protect people in this country and around the world from major health injuries from the loss of the ozone layer.

Mr. BURR. So, in fact, our negotiators have negotiated this Protocol. Your agency has suggested on the Clean Air Act that we actually eliminate methyl bromide 9 years earlier than other countries around the world. We didn't in the Protocol address the production and export in this country, and we allowed a hundred countries under this agreement to be listed as developing countries with the current criteria for use of methyl bromide to be that between 1995 and 1998 they will establish what will be a base, that they cannot exceed indefinitely, and that U.S. manufacturers can continue to produce methyl bromide in this country for export to those countries who have established bases and no date of ban.

Mr. POMERANCE. The issue of which—who will be the producers for countries with the right to continue to use a particular ozone-depleting substance is worked out in the Protocol. I think there is a phasedown of the developed country's ability—we can supply developing countries, even in the certain period of time for their uses, even though we are phasing out; but as they phaseout they may be producing for themselves.

Mr. BURR. But very important thing, Mr. Pomerance, that for 100 developing countries under this Protocol there is, in fact, no phaseout, is there?

Mr. POMERANCE. There is what?

Mr. BURR. There is no phaseout?

Mr. POMERANCE. There is a phaseout for all the chemicals but methyl bromide, which now has a freeze.

Ms. NICHOLS. And there was an agreement to revisit that issue, if I may, in 2 years, when the parties reconvene in 1997. So there will be a discussion of a phaseout for the developing countries.

Mr. POMERANCE. The history of it is that the developing countries have followed by some years the phase-out date of developed countries.

Mr. BURR. Okay. Let me go back to where you and I started, and that was the number of countries that had not yet ratified the Copenhagen agreement. They are not bound to the freeze, are they, until they ratify it and sign it?

Mr. POMERANCE. If they hadn't ratified the amendment that controlled methyl bromide, that is the—that would be true. But now there has been a decision taken to freeze methyl bromide, and we would expect the ratifications of developing countries that didn't have a reason, particularly, to ratify the Copenhagen Amendment, because it doesn't apply to them, we would now expect them to do so.

We have not had a compliance problem of that sort that I am aware of under the Protocol, overall. Countries have been participating in good faith virtually across the board. It has been a success. In fact, there is great eagerness. What happens in the developing countries is to jump technologies. They don't want to go through the phase of using CFCs that we have. They would rather jump to the substitute.

Mr. BURR. My only regret is that I don't have at my fingertips the projected increase of methyl bromide usage.

Mr. POMERANCE. In developing countries?

Mr. BURR. In developing countries.

Mr. POMERANCE. It is very large. Freeze on developing countries is a tremendous achievement in the competitive sense in that the—if there was no freeze, their usage would probably be, let me just guess, it would be 30 or 40 percent higher than it would be going into the—during the middle of the next decade, easily. So the fact that it is called a freeze is really—is going to be a significant reduction below the baseline of anticipated use.

Mr. BURR. But—and I hate to be a stickler on this, but I believe that the fine print and the signers are a very important part of it. In fact, there are a hundred people—a hundred nations who have not agreed to a freeze, right?

Mr. POMERANCE. Well, the——

Mr. BURR. Let me——

Mr. POMERANCE. Yes, if—your assumption is correct, but time will tell whether that is an issue. We don't expect it to be one. There are many developed countries—developing countries that have agreed to reduce or phaseout methyl bromide already.

Mr. BURR. And, for the record, let me again state we are not here debating whether our long-term objective should be a ban on methyl bromide. I think, to some degree, I am raising the question of whether we have entered into a good agreement, one that is in the best interest of not only the United States but all 150 countries that signed the original Protocol. Certainly for a hundred of them who have not agreed to the freeze they would probably say they have a pretty good deal, and is that in the best interest of this country right now?

Mr. POMERANCE. Well, we—it is absolutely moving the right way. We are getting—we have got a decision that all the developing countries have to cap their emissions. We didn't have one before. We had a unilateral phaseout.

Mr. BURR. Can you honestly tell me that under our current agreement, when we reach the year—let me use 2010 and those countries—I am summing it up, Mr. Chairman—those countries who have agreed to ban methyl bromide do in fact ban it, that the usage of methyl bromide in the year 2010 after we have banned—after we have stopped and those who have agreed to stop, can you assure me that the usage of methyl bromide won't be higher at that time because of the flexibility and the latitude that we have given developing countries under this agreement?

Mr. POMERANCE. I think we are going to be in great shape by then on this issue. Methyl bromide use will be down, far below where it would otherwise be, absolutely. We have provided for critical agriculture use exemption for developed countries at the time of the phaseout. So there will be some use. But, overall, we have capped the use globally of methyl bromide today, and it will start downward. Once the substitutes—more and more substitutes become available, I assume there would be a rapid phaseout of methyl bromide, as there has been and we anticipate for other chemicals. This has been—we go into each one of these chemicals——

Mr. BILIRAKIS. We can go on indefinitely. I very much appreciate your patience. You are very busy people.

But, really what it comes down to here I think is, the use of methyl bromide is being decreased. There is no question about it. But it looks like the United States is bearing much more than its share of that particular burden—or at least expected to bear much more than its share of that particular burden.

You know, we represent real people out there. We can talk theory all we want, but we represent real people; and we have got to be able to explain our policies to those real people. We are being asked to say to our farmers—strawberry farmers, whatever the case may be—that maybe it is their suffering; but it is really contributing to overall reduction in methyl bromide throughout the world. Even though it is a disproportionate portion on their part, they ought to go along with it for the good of the world, you know, that sort of thing.

Go ahead and try to sell that to your constituents. It is not an easy thing to do. You have got to take all that into consideration when you negotiate with these Protocol agreements and adjustments particularly.

I am concerned about these adjustments, and I am not really sure what the proper definition of an adjustment should be, and what the definition of an amendment which will require ratification should be. Because if an amendment requires ratification by the Senate, theoretically, it is the will of the people, because it is our elected representatives who are ratifying the agreement. In the other case of an adjustment, it is not.

It is something that you have got to take into consideration and we should all take into consideration in the process of trying to make these needed, hopefully agreed upon, mutually agreed upon, changes to the Clean Air Act to Title VI.

Thank you so very much for your patience.

Mr. ELWORTH. Mr. Chairman, if we could reiterate our interest in working with you and the majority and minority staff on this and other people who are interested in this issue, we would be glad to continue.

Mr. BILIRAKIS. All right, thank you. Let's hope that will be the case.

[Whereupon, at 1:51 p.m., the subcommittee was adjourned.]

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